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MAGAZINE

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By Frederick Blakeslee

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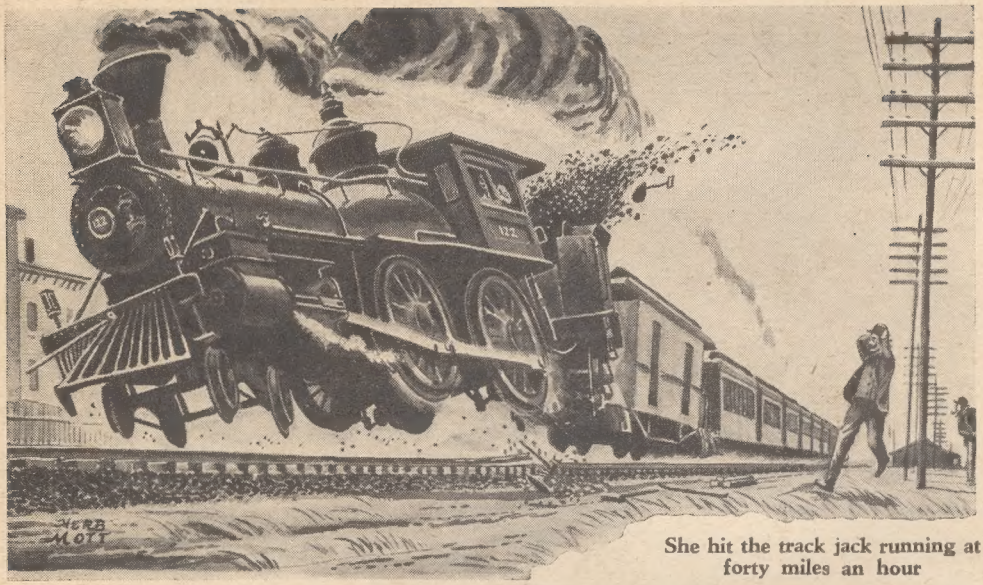


She hit the track jack running at forty miles an hour

Mishaps of The 122

By W. H. KILPATRICK

WHEN I READ about activities of well-organized railfan groups, I have to think back through the years to the time I started a little fan activity of my own. I was hardly ten when my parents took up their abode in a suburb of Boston, the new home standing beside the tracks of the old Colony Road. Only a board fence separated our back yard from the right-of-way.

Naturally, it was not long until I became familiar with the many engines which passed that spot from day to day. No two had bells which sounded exactly alike, so I had little trouble memorizing the various tones and engine numbers. This made it easy to identify approaching engines as soon as their bells began ringing for the nearby crossings.

It must have been in 1888 when I first heard the bell with the golden tone that set her apart from every other bell on the Colony. I wasn't slow, of course, in discovering what engine it was on—she was Number 122. While I saw her hundreds and hundreds of times in the following thirty years, I have to admit that my memory's a blank as to what the builder's nameplate on her smokebox said. However, I've always considered her a product of the old Taunton Locomotive Works, since her lines were similar to many of the old Taunton engines on the road.* In those days, each builder had his own design for such accessories as dome coverings and sandboxes. Because of this, it required no expert to distinguish the models of the various makers.

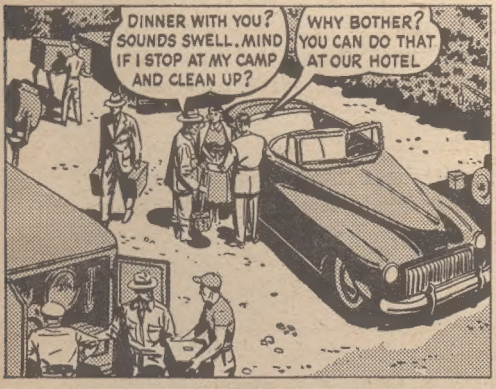
In August, 1890, Number 122 made the headlines in papers across the country as the engine involved in the worst wreck in the Old Colony's history. It was the famous Quincy disaster which took a toll amounting to about forty in deaths alone.

Through the years following, the track

*According to official reports, Number 122 was completed April, 1844, in the Old Colony Shops under the direction of J. N. Lander, S.M.P.

JEFF LOST INTEREST IN FISHING WHEN...

WORKING HIS WAY THROUGH THE HEAVY BRUSH TOWARD HIS FAVORITE TROUT POOL, JEFF MILLER'S THOUGHTS OF A BIG CATCH ARE RUDELY INTERRUPTED • • •



MEN, FOR SHAVES THAT REALLY RATE — FAST, CLEAN AND GOOD-LOOKING — USE THIN GILLETTES. FAR KEENER AND LONGER-LASTING THAN ANY OTHER LOW-PRICED BLADES, THIN GILLETTES ARE PRECISION MADE FOR YOUR GILLETTE RAZOR. YOU SHAVE IN PERFECT COMFORT AND PROTECT YOUR FACE FROM SCRAPE AND IRRITATION ALWAYS ASK FOR THIN GILLETTES
THIN
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layout just north of Quincy station has been little changed. Looking north from the platform, you see two mainline tracks curving rather sharply to the left for a distance of some two hundred yards; at the north end of this curve, there's a low highway overpass with limited side clearances. These conditions naturally prevent, or rather radically limit, the enginemen's vision of the tangent to the north of the bridge, when the train is bound in that direction. Running on the righthand track, a fireman can see some distance as he nears the bridge. However, in the days of the old Colony, his view was shut off until his engine reached the beginning of the tangent because operations were then left-handed.

This was the situation during the Summer forenoon when Number 122, hauling a nine-car train from Cape Cod, rolled past Quincy at about forty miles an hour. Approximately two hundred yards north of the highway bridge, she left the rails, spun round until she was headed south and came to rest on her side. The baggage car and the coach behind were practically demolished, the second car was torn from its trucks and deposited right side up across both tracks, with the end of the following coach buried in its side. Of the eight coaches in the train, only one or two on the rear stayed on the rails.

The list of dead included Engineer Babcock and Fireman Ryan as well as one or two members of the train crew.

The cause of the derailment remained a mystery until late the next day, when a clue was unearthed which made everything clear. When I say unearthed I mean literally that—for in cleaning up the debris a much-battered track jack was found buried in the gravel roadbed. Confronted with that damaging evidence, Section Foreman Welch admitted that he and his men had been using the tool under the lefthand rail without proper flag protection. This time the mechanism of the jack refused to function, in spite of the frantic efforts of the sectionmen. Welch was later convicted of manslaughter and served a term in prison.

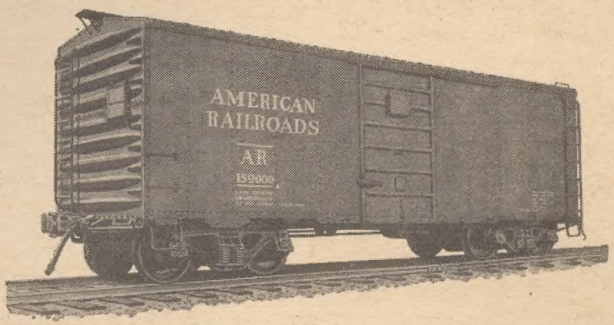
In later years I often talked with old-timers about the wreck. It was generally conceded that Fireman Ryan had stepped down to look after his fire before reaching the highway bridge. Had he been riding on his seat as the engine reached the tangent, he might have sensed the danger ahead, seeing the performance of the sectionmen on his side, and notified Babcock in time for the latter to apply his brakes. Of course, that was mere conjecture.

It seems odd that the worst previous wreck on the Old Colony also took place within the limits of that same city—Quincy—on that same track, and just a mile to the north. That was the Wollaston wreck which occurred during the late Seventies with a considerable loss of life. The train involved was a northbound excursion, which ran through an open switch and collided with some standing cars.

As near as I can remember, it was only a year later, the summer of 1891 when the 122 was again in the news. She was then hauling the *Dude,* a fast three-car, semi-chartered train which served Boston business and professional people who had summer homes along the east coast of Buzzard's Bay. The *Dude,* was scheduled without stops between Boston and Buzzard's Bay.

One afternoon, the train made an abrupt halt at the Bridgewater Iron Works station, when a freight run failed to clear the main line in time. When the dust had settled, there were at least fifteen empty four-wheeled dump cars scattered over the right-of-way and the front end of Number 122 was mussed up a bit. Though the passengers and crew were shaken up considerably, there were no fatalities or even serious injuries.

When the New Haven took over the Colony Road in 1893, the new numbers of all Old Colony power were arrived at by simply adding 600 to the old ones. But in 1904, the New Haven renumbered its power according to classification and the 722 became Number 1762. The Hoodoo was on her good behavior during the few years that remained till she was retired in 1915.



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power. The others were of little worth and after being tried out in regular service were abandoned as too visionary or impractical for railroad use. Some of these crack-pot designs resulted from the endeavors of sincere inventors to overcome inherent deficiencies in ordinary locomotive design and construction. Others were furthered by stock promoters who jumped at the chance to sell a new idea to unwary persons desirous of becoming rich quickly. Needless to say the latter invariably lost their money.

Here, we will not deal with ideas that proved to be of some permanent benefit but will study a few of the more outstanding oddities as they came on the scene, flourished for a few years and then disappeared entirely. Following the introduction of the *Rocket* in England, nu-

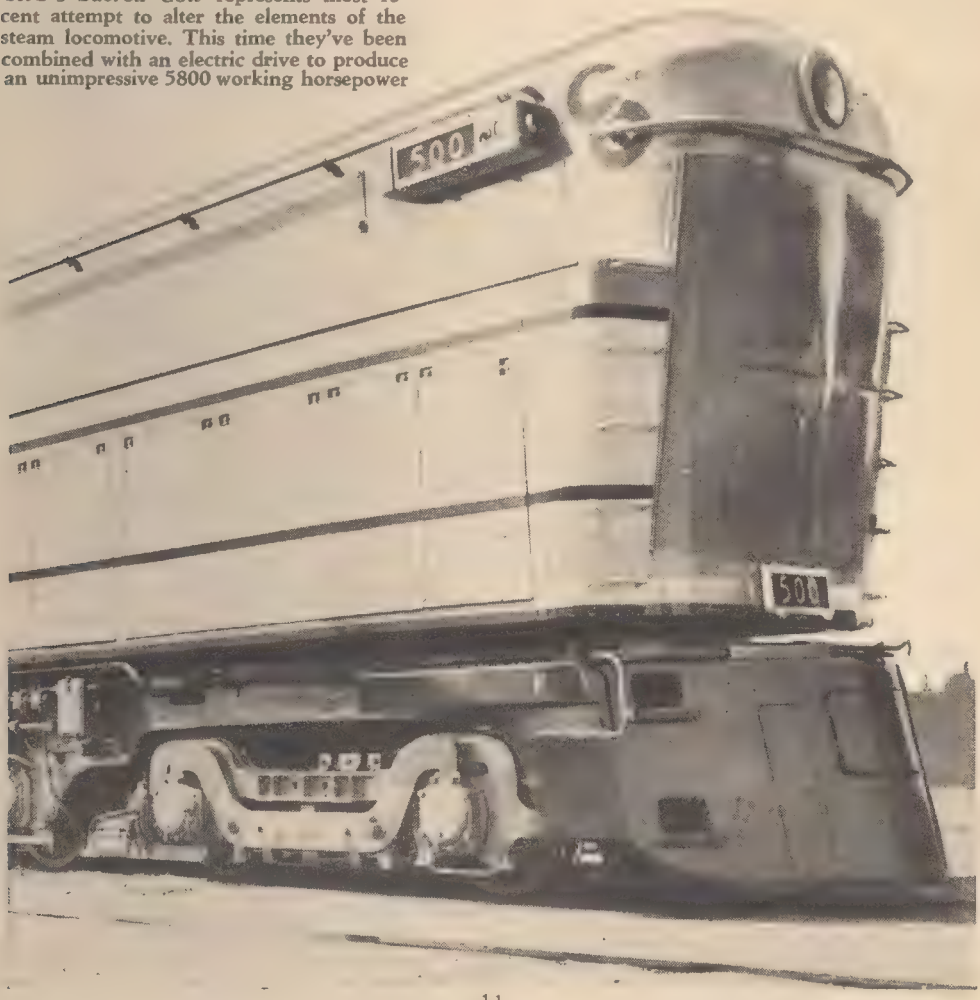
Locomotive Oddities

FROM 1829 when the Stephensons produced the *Rocket,* the first successful locomotive from which our modern machines are descendents, all manner of men have striven to improve upon this simple yet rugged design. Their ideas ranged all the way from the sublime to the ridiculous, and only a few have stood the test of time and became acknowledged improvements necessary for the economical operation of today's motive

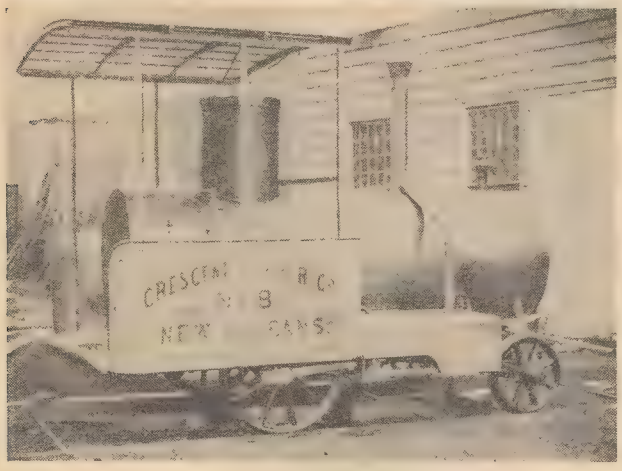
merous attempts were made to improve the working of locomotives by the use of various types of levers and crank drives, but we will disregard these and devote our review to a number of freaks built in the United States, especially those built after the Civil War when the railroad world was kept busy over a period of thirty years announcing and trying out a flood of oddities in locomotive design. The various types of compound locomotives that came within this period and were fairly successful in their time are not included in this review.

Our first oddity is the large-drivered Crampton engines built by Norris Brothers of Philadelphia for the Camden & Amboy. These engines, seven of which were outshopped between 1849 and 1853 were generally called "Stevens" engines after the name of the principal owner of the road, who favored their design. They had a single pair of driving wheels and a 6-wheel forward truck. On three of the engines the drivers were 96 inches in diameter and on the other four engines the drivers were 84 inches in diameter. The cylinders varied from 13 inches in diameter to 14 inches and the stroke was 38 inches on six of the engines and 34 inches

C&O's *Sacred Cow* represents most recent attempt to alter the elements of the steam locomotive. This time they've been combined with an electric drive to produce an unimpressive 5800 working horsepower



At left: England's Cramptons were impetus for C&A's *John Stevens,* designed by Isaac Dripps and built by Richard Norris & Son. Single pair of 96-inch drivers made for insufficient adhesion; but once started the locomotive pulled a six-car train. Period the seven Stevens were in service lasted from 1849 to 1865



Below: Todd's toddler, or the origin of the fireless cooker. Produced in the early 1870's this canopied contraption took its steam from a stationary boiler; rattled over the horsecar lines of New Orleans with traditional Mardi Gras abandon

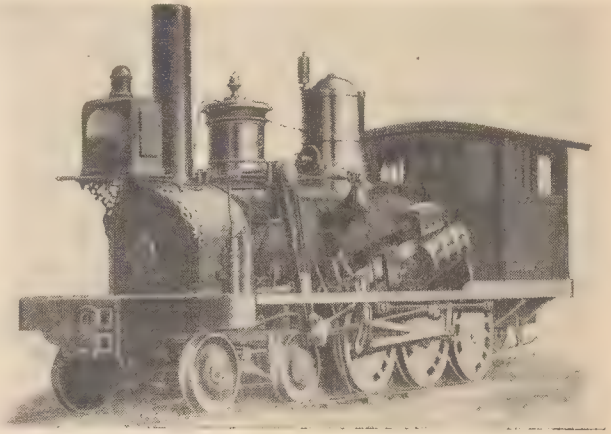
on one. As will be noted in the photograph, these engines presented a most ungainly appearance; they were limited in their hauling capacity, slow in starting but rather fast after they once got going. Most of them were rebuilt into 4-4-0 types within a few years.

The Camden & Amboy was the originator of another freak known as the *Monster,* an 0-8-0 begun in 1838 at their Bordentown shops but not completed until some time later by a contractor in Trenton, N. J. It was a weird assemblage of cranks, connecting rods and gears between the middle driving wheels, so contrived as to give master mechanics plenty of headaches. It was rebuilt as a 4-6-0 in 1869.

Nicoll's *Novelty,* built in 1847, is the next freak to attract our attention. It was a product of the Philadelphia & Reading Railroad Shops who worked from the designs of their general superintendents and chief engineer, George A. Nicoll. This engine was composed of two main parts, a driving portion which was essentially an 0-8-0 locomotive with a boiler barrel that acted as a steam storage reservoir since it had no firebox and a supplementary car upon which the main steam-producing boiler was mounted. This boiler had flat sides on the lower portion of its barrel, burned anthracite and had a flexible steam connection to the boiler on the main engine. A tender was attached to the supplementary car and coal was fed to the main boiler, which was of the return tube variety at the end where the straight stack is shown. The fire was urged by air driven by a blower instead of by the usual exhaust. The *Novelty* was, of course, a failure from an operating standpoint.

Another freak of this period was the *Vampire* built in 1856 at the Novelty Iron Works in New York City. It is described as a most singular looking machine with the engineer's house upon the forward

part of the engine and no smoke stack in front to obstruct the view of the track. Intended to make possible a great saving of fuel by producing the most effect from the coal it burned, the machine was impelled by both heated air and steam in a manner invented by Phineas Bennett along the lines of John Ericsson's caloric engine, then at the height of its popularity. The engine was tried out on the Erie during April, 1856. While running at high speed near Paterson, N. J., it ran off the track. Fortunately neither the engine nor its crew was injured. The *Vampire* was of the 4-4-0 type without a tender. She carried enough coal in the bunker to run her 300 miles and she weighed 41 tons in working order. The total cost was $40,000.00

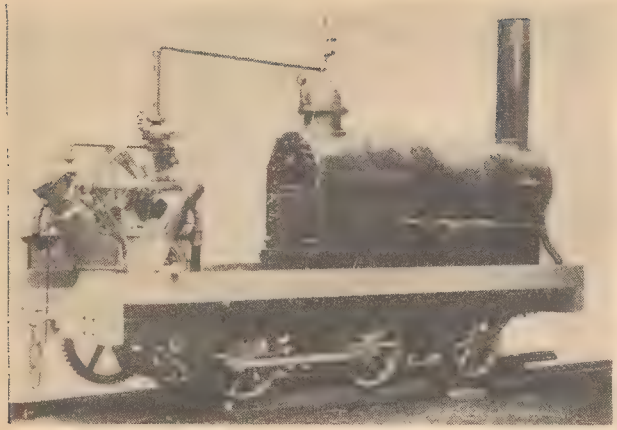


Rube Goldberg couldn't have improved on the Camden & Amboy's aptly named *Monster*. But PRR mechanics took a fling at it in 1852 when they converted the weird 0-8-0 into a hardly more conventional ten-wheeler. She prowled the road as late as 1875

THE dark days of the Civil War dampened the ardor of inventors of new types of locomotives and it is not until the early 1870's that we find one Joseph C. Todd bringing out his steam storage engine. This was not altogether a freak for it became the forerunner of the present day fireless locomotive. It was unique in its time and was successfully used on a number of street railways, especially in New Orleans where the climate caused the horses great suffering. Todd had also designed a geared type of locomotive intended for hill climbing, one of which was built for the Lodi Railroad in New Jersey. It was used for some time but was superseded by a conventional switcher in 1869.

Although it was never actually built, the radical type of engine invented by Matthias Forney is described here because it was the forerunner of his more successful double-ender. During the late 1860's and early 1870's he obtained patents covering a variety of designs, of

Introducing Nicoll's *Novelty*, a babe that didn't know her 0-8-0 half from her supplementary car, nor where to find her boiler. Designed for the P&R, she was a road failure, but rail exhibitions have been known to include her in "Development of the Locomotive" pageants



At left: Get a load of *Lodi Number 1*, another of Todd's triumphs. She hoisted a few cars out of the Hackensack meadows at an uninspired pace; was consigned to the mosquitos in 1869

Below: No, you're not seeing double, but Fontaine's subscribers were when they bet good money on driving wheels mounted over and under the boiler. This band-saw-inspired number defied the mechanical axiom that what is gained in speed is lost in power

which this was one. Its outstanding difference from other locomotives was the vertical boiler mounted upon a conventional 4-4-0 running gear which had the tender at its forward end.

Eugene Fontaine of Detroit patented a freak locomotive on July 27, 1880, and proceeded to have three built at the Grant Locomotive Works. His so-called friction drive became the topic of railroad men and many words were printed pro and con on the subject. The friction drive consisted of a large pair of driving wheels mounted over the boiler with conventional cylinders set at an angle for motivation. The pair of drivers rested upon a smaller rim attached to a bearing wheel or driver which in turn ran on the rail, the idea being that the friction gearing would produce higher speed. Some technical writers of the day were rather caustic in their criticism of the Fontaine engine and described it as a stock promotion hoax.

The first of his three engines was of the 4-2-2 variety and had cylinders 16x24 inches. The upper friction wheel was 72 inches in diameter and the lower one 56 inches in diameter while the driver on the rail stood 70 inches high. The trailing wheel was 42 inches in diameter and the truck wheels 28 inches in diameter. A weight of 34,000 pounds was carried upon the drivers and the total weight in working order was 84,000 pounds. This engine ran upon the Erie railroad and on the Pennsylvania before it was transferred to the New York Central & Hudson River for a trip to the Canada Southern line, where it was operated in the fall of 1881.

Of the three Fontaine locomotives, Numbers 1 and 2 were to be passenger engines and Number 3 a freight machine of

the 4-4-0 type. When Engine 1, just described, proved to be deficient in tractive force its mate, Number 2, was not completed and work was concentrated upon the completion of engine Number 3. This was outshopped by Grant in September, 1881. The driving principle was the reverse of that of Number 1, the upper rivers being 60 inches in diameter, the friction rim 70 inches and the main drivers resting upon the rail 78 inches in diameter. The cylinders were 17x24 inches and the truck wheels 40 inches in diameter.

Nothing unusual about this Grant-built locomotive? Then look inside the tender, fireboy—that's naphtha and water we're going to convert into gaseous fuel. Meet the inventor, Mr. H..... hey! Where did that bakehead go!

Number 3 was broken into service operating a work train used in constructing the Erie's Bergen County railroad. It was then transferred to the New York Central & Hudson River where in January, 1882, it ran a heavy train of eight cars from Albany to Syracuse. The weather was extremely cold and stormy and the engine did not perform very well. Continuing its westward journey, it was coupled at Syracuse to a 20-car train hauling iron salt to Buffalo, N. Y. The train weighed 356 tons and the engine did not prove equal to the task. The upper wheels slipped to such an extent that the engine was declared not a success and had to have the aid of a pusher.

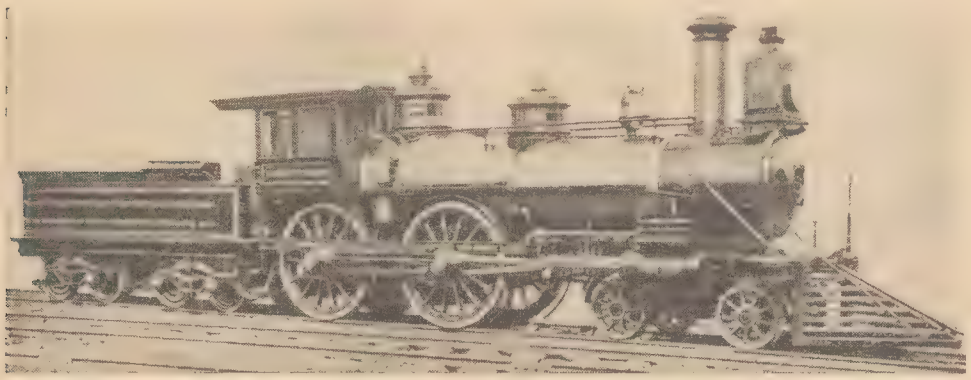
In the following year all tests were stopped on the Fontaine engines. On January 12th, 1885, an item in the *Toledo Commercial Telegram* announced: "The two Fontaine engines constructed a few years ago will be remembered by all railroad men, one of the engines with a freight train attached having made 15 miles in 10 minutes or 90 miles an hour, on the old Canada Southern track between this city and Monroe, Michigan. The two engines were constructed at a cost of $45,000, including the expenses of the tests. They were tried on several roads only to demonstrate the mechanical axiom that what is gained in speed is lost in power. A greater speed than 60 miles an hour is not considered an advantage and the saving in fuel promised in this engine was not proved. The engines were tried on the Hudson River, the Canada Southern and the Oxford & Port Austin railroads and Saturday the closing scene in their history occurred by their sale for $2,700.00 to the Lake Erie & Western railroad.* This road will place them in the shop where they will be reduced to the ordinary style of locomotive and the Fontaine engine will only live in memory."

The Grant Locomotive Works seems to have been looked upon with favor by the inventors of the day for this shop turned out another unique job in October, 1881, known as the water gas locomotive. This engine was a husky one and differed from conventional engines only in the matter of fuel. But what a difference! The inventor, C. Holland, had patented a gas burner using naphtha and water as fuel.

** Now part of the Wheeling & Lake Erie.*

This was carried aboard an ordinary tender provided with a gas generator and a naphtha tank in the coal space. The firebox was long and narrow with rows of burners in it and the flames were conducted through several hundred flues about 5/8 inches in diameter. Therein was its failure. The flues clogged up and the engine would not steam. Also, due to the highly explosive nature of the fuel, the men were afraid to run it. The *C. Holland,* as the engine was named, was built for the New York, Heat, Light and Power Company and ran for a while on the Erie and to Boston, from whence she was brought back to her home town and scrapped.

Another builder favored by the experimenters was the Hinkley Locomotive Company of Boston, Mass. This company turned out the engine *Henry F. Shaw,* named for its inventor, in 1881. The plan



Example of the "motor of balance"—a four-cylinder simple engine, or so it was advertised. Road tests proved that she wasn't worth the high cost of maintenance. Records of further orders for the type are lacking

of the Shaw locomotive was to place on either side of the locomotive a duplicate set of revolving and reciprocating parts so connected that one set on one side would be thrusting in the same direction at the same instant and thus tend to correct the inherent unbalance of a reciprocating engine. The locomotive was equipped with four cylinders, all of the same 10½x 24-inch stroke. Two cylinders were cast in one saddle on each side. When connected, the pistons in each pair of cylinders worked in opposite directions and were connected to a double throw crank at the wheels. The engine was provided with a regular set of frames and a supplementary frame on the outside of the driving wheels. This carried the bearing in which the double throw crank was fulcrumed. Driving wheels were 63 inches in diameter and the total weight in working order about 74,000 pounds. Stencilled on the outside of the tender of the *Shaw* was this legend: "No counterbalanced drivers, Ergo, no hammer blows, and no nosing around. Steam is the motor of balance as applied to the reciprocating parts. A single movement of force with duplex action."

When completed, the Shaw first ran experimentally on the Boston & Providence railroad, and subsequently on the Fitchburg. In September, 1881, it was transferred to the Camden & Atlantic, on which in November of that year it ran 60 miles in 61 minutes. During March, 1882, the *Shaw* ran over the Delaware & Bound Brook (Reading), where it hauled a 3-car train 50 miles in 56 minutes. After this, the Shaw lost prominence, even though Promoter William E. Lockwood did his best to bring before the public the advantages of a completely balanced locomotive. The last record we have shows that the *Shaw* ran on May 12, 1883, on the Pan Handle Railroad between Urbana,

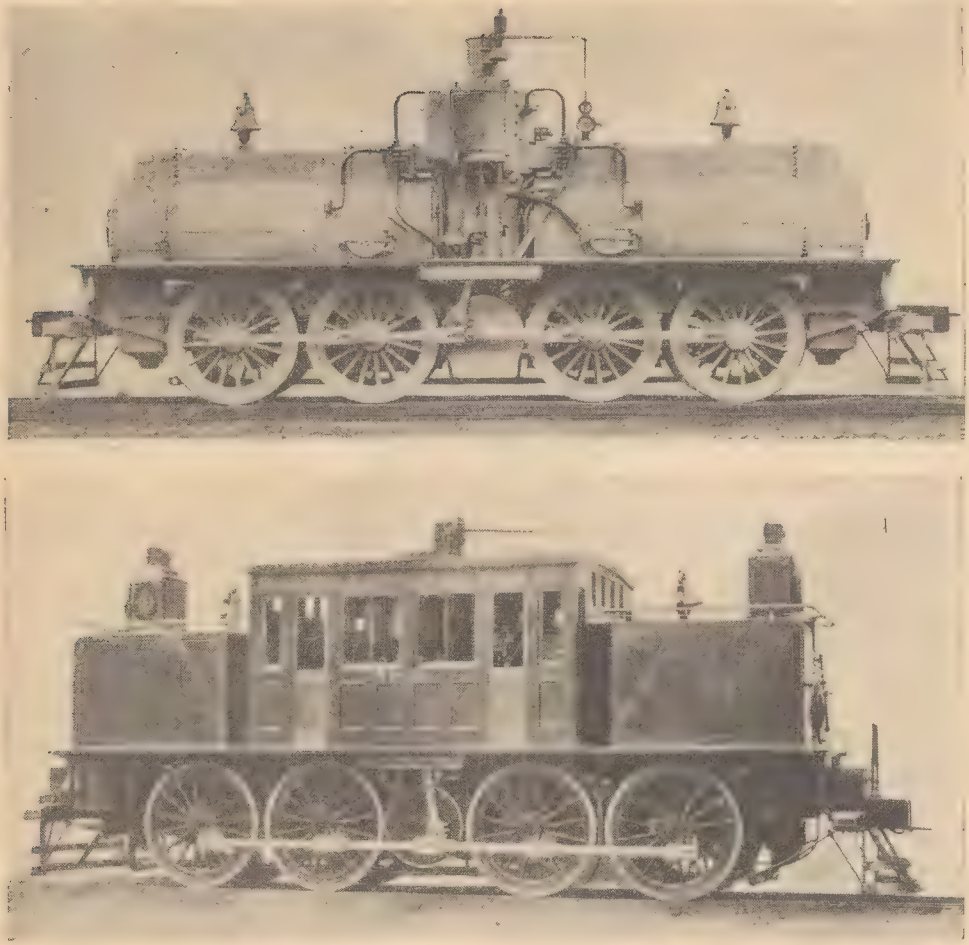
Ill., and Columbus, Ohio, where it made 73.5 miles an hour. Ten years later the engine was sold to the Sea Isle & Cape May Railroad. The inventor, Henry F. Shaw, died at the age of 80 in 1911.

Little can be said in favor of the next noble experiment to be tried on American railroads, an engine named the *America* and constructed as Number 1024 by the Brooks Locomotive Works in June, 1884, for a newly formed company called The Chicago Locomotive Improvement Company. The distinctive features of this locomotive was the Coventry-Ford patent boiler having a return flue the entire length of the barrel, and the stack at the rear, adjacent to the cab, which gave the engine a rather odd appearance. She did not make out very well as a good steamer. The cylinders were 17x24 inches and the drivers 60 inches in diameter. After a fitful existence Number 60, as it was then called, was sold to the Louisville, New Albany & Chicago railroad (Monon); they converted her to an ordinary 4-4-0 type with a conventional boiler at their New Albany, Ind., shops in 1889.

First locomotive built for the "colonies", and sister engine of the *Stourbridge Lion*, was called the *America*; so was the Grant-built gold medal-winner at the 1867 Paris Exhibition. In a novel bid for equal distinction, Brooks'-built *America*, No. 60, sported her smokestack behind the steam dome

ANOTHER freak locomotive that was heralded far and wide as a world beater was the Raub Central Power engine built by the Grant Locomotive Works in October, 1886. Dr. C. Raub, the inventor, patented this contrivance on September 13, 1883, and with the aid of the Busch interests of St. Louis launched a company to further the device. The locomotive was numbered 1 and was of the 0-8-0 wheel arrangement with a jackshaft running across the frames between the middle drivers. This shaft was driven by vertical connecting rods and cylinders attached to an upright frame at the center of the engine. Two short, horizontal boilers extended from this central frame toward each end of the engine. Each boiler had a separate firebox with the firedoor placed at the side; a large return flue conducted the products of combustion from the smokebox back to a common smoke stack at the center of the engine. A communicating steam pipe conducted steam from each boiler to the cylinders. The result was a rather unreliable situation with one boiler being sucked dry while the other one remained full of steam.

Raub's *Central Power* was tried out on the West Shore and then mounted on a flat car for shipment to St. Louis. A representative of the Grant Locomotive Works went along to run her and demonstrate the wonders of the new engine. The local newspapers were well primed beforehand and carried columns of stories, but after a trial run on which a special train was provided for the members of the press and other notables, their enthusiasm waned. They left St. Louis on the Iron Mountain Railroad and journeyed out a



Raub's Central Power Engine may well have established the external pattern for Pennsy's L-5 electrics. But she antagonized the press by her palsied performance with a trainload of St. Louis reporters on the Iron Mountain Railroad; a pitiful exhibition which ended abruptly when the steam ran out

few miles, sometimes hitting up to 80. The engine pitched and rolled like a rocking horse, and then the steam ran out. The upshot of the matter was that the locomotive was declared a fake of the worst sort and returned to the builders, who later cut her up.

The locomotive *Onward,* built by Hinkley in 1887 for the Swinnerton Locomotive Driving Wheel Company, was notable for its odd driving wheels. These had tires on which the surface was cut with 360 flat facets, the better to grip the rail, it was thought. The polygonal driving wheel, as it was called, did not prove to be any better than the plain type and the engine was sold to the Portland & Rochester. It was rebuilt into a 4-4-0 type when the Boston & Maine absorbed the P&R. The engine was of a neat design and provided with a Belpaire firebox.

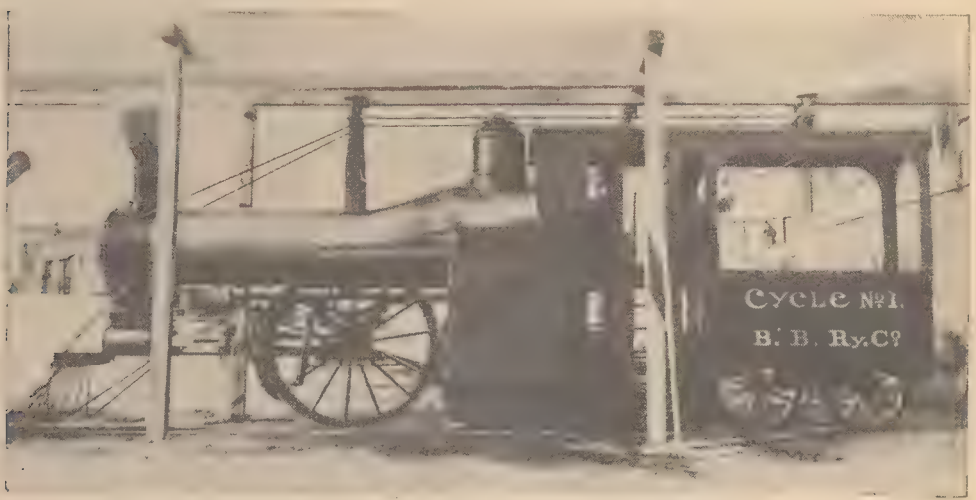
Another locomotive of the single driver 4-2-2 type was built in March, 1880, by the Baldwin Locomotive Works and sold to the Eames Vacuum Brake Company. Not altogether a freak, it was built along conventional lines with Wootten's wide firebox, but had the cab placed over the firebox instead of ahead as on most camel back engines. Actually this engine had been ordered and built for the Philadel-

phia & Reading but financial difficulties had resulted in the engine's never being delivered to that road. After its sale to the brake company, it was used for demonstration purposes and eventually sent to England where it ended its days. The bell was

5000th locomotive built by Baldwin, and a landmark which Eddystone would just as soon forget. Not quite certain where to place the cab, designers finally set it in a warm spot over the Wootten firebox

preserved and is still in existence. The *Lovett Eames* was the 5,000th locomotive built by Baldwin.

Perhaps the freakiest of the lot of odd engines ever built in this country was the *Cycle No. 1* built for the Boynton Bicycle Railway Company by the Portland Company's Works in February, 1889. E. M. Boynton was the instigator of this queer rig. He managed to acquire a short line on Coney Island, N. Y., where he demonstrated the so-called advantages of the one-rail line which would virtually convert any single track to a double track railroad. The engine had one driving wheel eight feet in diameter, with two cylinders 12x14 inches. It hauled a pas-



Coney Island freak was Boynton's Bicycle Railway, guaranteed to make one rail do the work of two. Only catch was that the other one had to be hung above it to keep passengers from sliding along on the sides of their heads

Wanna buy the Brooklyn Bridge? Not if you'd lost your thousand-miler on a block of Holman stock. Holman was the boy who was going to put the locomotive on its feet—round ones, that it

senger car that was 4 feet wide, 14 feet high and 42 feet long with a capacity of 108 passengers on two levels. The main joker of the whole scheme was that an overhead structure had to be erected to prevent the locomotive and car from falling over. If anything went wrong with this—and it did—the train promptly went into the ditch. The line was abandoned.

The Holman absurdity was a classic example of how not to build a locomotive! Holman conceived this brainstorm in 1894 and tried it out on a rebuilt engine of the 4-4-0 type on the Minneapolis, St. Paul & Sault Sainte Marie. Meeting with success in gathering in money from would-be stockholders he proceeded to have another engine built, this time by the Baldwin Locomotive Works in 1897. Both engines built after the Holman plan had a multiple wheel truck and used a friction drive somewhat like that of the Fontaine freaks. The reason was the same, to get higher speed by driving small wheels on the track with the main drivers. The larger of the two engines was demonstrated on the South Jersey Railroad (Central Railroad of New Jersey), which eventually bought it and rebuilt the engine into a conventional 4-4-0. Many persons were lured into buying stock in the Holman Co. by propaganda saying that this new type of locomotive was the coming thing. It came and—it went, as did their money.

One of the weirdest examples of odd locomotive construction was the Johnstone double ender built by the Rhode Island Locomotive Works for the Mexican Central in 1892. F. W. Johnstone was the mechanical superintendent of that road and he inflicted this new design upon three locomotives. The reputed purpose of this unique type of engine was to provide an extraordinarily powerful machine for climbing steep mountain grades and to go around very sharp curves with the least possible frictional resistance. Flexibility was obtained by mounting the driving wheels in a truck, which was free to move independently of the main frames which carried the cylinders and boiler. As the cylinders were not in line with the driving wheels in passing curves, it was necessary to use a special method of transmitting the power.

This was soon accomplished in a very ingenious way through levers that transmitted the power and at the same time compensated for the varying distances between pistons and crank due to the swivelling of the driving wheels.

The power-transmitting levers were just back of the cylinders, connected at the top by a short link and the bottom ends attached to the front end of the main rods. There were two of the latter, one connecting with a crank pin, the other with a return crank. The piston transmitted motion to the back one of the two levers

and that gave motion to the front lever, which was fulcrumed securely to the frame near its center. The engines were equipped with annular cylinders working on the compound principle. The high-pressure cylinder, 13 inches in diameter, was in the center surrounded by a concentric, low-pressure one which was 28 inches in diameter. The stroke was 24 inches and the pistons of both cylinders were fastened to a common crosshead. It was difficult to keep the engines at work and they were eventually converted to simplified forms.

The year 1892 seems to have been the fateful one for flexible engines. Following the Johnstone engines, the Baldwin Locomotive Works built a double-end job for the Sinnemahoning Valley Railroad (later part of the Buffalo & Susquehanna, now Baltimore & Ohio). This machine had two separate trucks, each with six driving wheels which were driven by Vauclain compound cylinders, 9½ and 16 inches in diameter with an 18-inch stroke.

There had been double end engines built prior to this and in later years the Mallet type came along with its own mode of flexibility; but there was only one of the Baldwin class.

AN EARNEST attempt to improve the conventional type of locomotive was made in 1898 when the Intercolonial Railway of Canada bought a 2-8-0 engine from the Baldwin Locomotive Works.

The cylinders were of the elongated variety, the arrangement being the invention of William F. and Eugene W. Cleveland, who resided in Reunthwaite, Manitoba. The pistons were mounted two upon each piston rod at some distance apart. The steam acted upon the outsides of the pistons on the uniflow principle. That is, when the piston passed a certain point near the center of the stroke, it uncovered an exhaust port allowing the steam to escape between the two pistons and out the stack. Thus, live steam entered the cylinder, did its work and passed out in the same direction. The engines were moderately successful and it was planned to convert all Intercolonial Railway engines to this principle. However, the heavy weight of the cylinders proved too much, and the idea was finally given up in the early part of the 1900's.

This rare collector's item should have been numbered 150-151 for east and westbound movements. The good neighbor policy got a double-barrelled blast when Rhode Island shipped her to Mexico in 1892. Not even the application of main- and siderods helped her much

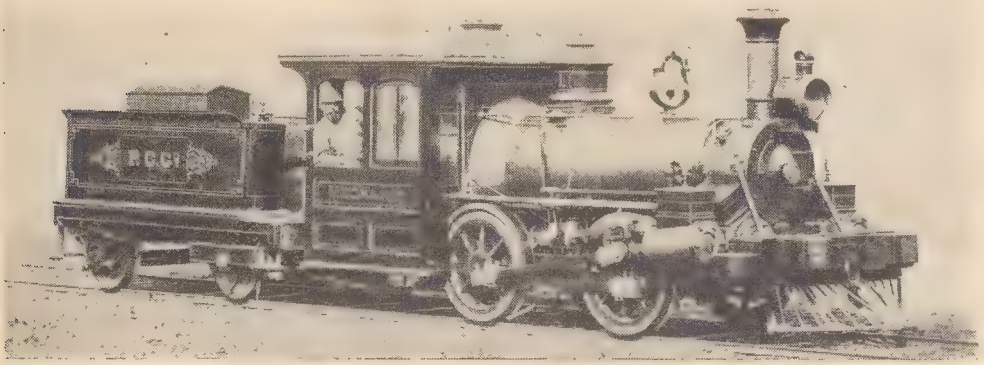
Canada's inventors provided another freak to run on American rails when the Bothwell Locomotive Company of Owen Sound, Ont., rebuilt an existing 4-4-0 with two pairs of smaller driving wheels that were connected by auxiliary rods to the main and side rods. The purpose of the scheme was to make a locomotive with maximum hauling capacity and minimum weight, cost and maintenance. When the small drivers were on the rail, the large ones were lifted clear of it and vice versa.

The engine had the equivalent of a dual personality—high speed one minute and low speed the next. It was a failure.

During the present century a few notable examples of odd locomotives have been constructed, including the triplex Mallets used on the Erie and Virginian railroads. Four of this type were built, three for the Erie and one for the Virginian, the latter with a 2-8-8-8-4 wheel arrangement. The Erie engines were of the 2-8-8-8-2 type and in all cases the third engine was located under the tender. The first engine appeared on the Erie in 1914 and the next two arrived from the Baldwin Locomotive Works in 1916. They all had cylinders 36 inches in diameter with a 32-inch stroke and 63-inch drivers. The right hand cylinder exhausted into the two front cylinders and the left-hand central cylinder into the rear pair. The engines worked compound and weighed about 430 tons each in working order. They were prove to be a howling success and was converted into two separate locomotives, the forward engines being made into a new Mallet and the rear engine into a 2-8-2 type.

It was during this same period that the 3-cylinder simple engine was being developed by the American Locomotive Company. A large number of them were built, some of which are still in use. They can not rightfully be called freaks.

In 1926 the Baldwin Locomotive Works built their 60,000th engine, a special 4-10-2 type compound with a water-tube firebox and a boiler pressure of 350 pounds. The high pressure cylinder was set under the smokebox and drove a crank axle, while the low pressure cylinders occupied the customary space on either side of the engine. All cylinders were of the same size, 27 inches in diameter by 32-inch stroke. The engine weighed 457,000 pounds and had a trac-

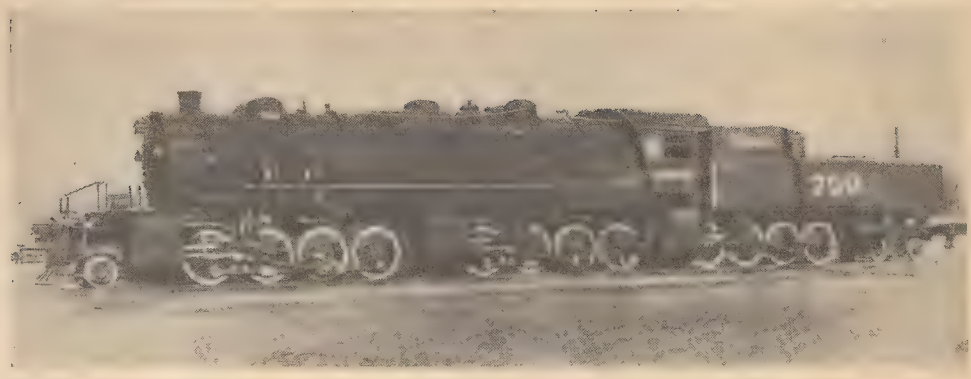


Maybe they should have sanforized her. Mine engine built by John Smith—no relation to Pocahontas Coal—introduced the three-cylinder simple drive to American railroading

in use pushing heavy freight trains over the Susquehanna hill in Pennsylvania for about ten years but were relegated to the scrap heap when more modern power appeared upon the scene.

In the same year, 1916, the Baldwin works turned out the Virginian engine, which had six cylinders all of the same size, 34x32 inches, on the same compound principle as the Erie engines. The drivers were 56 inches in diameter and the engine weighed about 422 tons. It did not tive force of 82,500 pounds. It was tried on a number of roads, notably the Southern Pacific and others in the West but gave considerable trouble from its high pressure boiler. It now reposes in the Franklin Institute at Philadelphia and is the main exhibit in the Transportation Building, where young and old may climb all over it.

The idea of using three cylinders, all of the same diameter, to turn the driving wheels of a locomotive, was not a new one



Triplex engines were handicapped by inadequacy of their boilers. This one, built for the Virginian, was the flower and fruit of a noble experiment, boasting two more trailer wheels than her Erie cousins

but it had remained for John B. Smith, general manager of the Pennsylvania Coal Company at Dunmore, Pa., to prove that it would work. In 1879 he designed a small 0-4-0 switcher at the company's shops. It had cylinders all of the same size and the inside one drove a crank axle while the outside ones were in the usual location. An extra set of Stephenson link motion was applied to operate the inside cylinder. Smith was so well pleased with the new device that he was urged to try it on a larger engine. The switcher was used only around the company's shop, so his next job was for a full-size railroad, the Erie & Wyoming Valley (Erie), then owned by the Pennsylvania Coal Co.

This engine was of the 2-8-0 type with a Wootten boiler. It came on the road in 1884, having been constructed by Mr. Smith at the Dunmore shop. Eight years later he again tried his hand, and brought out a handsome 4-4-0, Number 34, also with the Wootten firebox. This was a well-built machine and inspired the building of three freight engines of the 2-6-0 type in 1894. These were numbered 35, 36 and 37 and were all built by the Baldwin Locomotive Works. The three cylinders on each engine were 17 inches in diameter by a 24-inch stroke and the drivers were 57 inches in diameter with a weight upon them of 110,100 pounds. The Wootten firebox was again used with the tender carried upon six wheels in a rigid frame. All of these engines were converted to two-cylinder single expansion after the Erie acquired control of the coal company.

Success of the *Mechanic* encouraged Smith to produce a larger three-cylinder locomotive. She had points in her favor but, then as now, shopmen looked askance at the maintenance of inside rodding

Commendable efforts to improve upon the conventional locomotive were made by George S. Strong of Philadelphia in the 1880's and '90's. The design above, which never got beyond the drafting room, called for elimination of siderods by attaching two mainrods, through coupled crossheads, to a single piston rod

Probably the greatest attempt to alter the design of American locomotives through a sincere desire to improve their efficiency was made by George S. Strong of Philadelphia. He devised a number of appliances which were incorporated in several locomotives built or designed during a 10-year period. The first improvement brought out by Strong was a set of so-called gridiron valves intended to give better steam consumption than the ordinary slide valve then in common use. A set of these valves was applied to a 4-4-0 locomotive of the Lehigh Valley, built at the Wilkesbarre shops in 1884. Numbered 383 on that road, *Elisha A. Hancock* had cylinders 19x24 inches and drivers 66 inches in diameter. Prior to the building of this engine, Strong had advocated an entirely new design, as is shown in the engraving taken from *The National Car-Builder* of February, 1883.

He sought to eliminate connecting rods by attaching two main rods to two crossheads driven by a single piston rod. The engine was to have a 4-4-2 wheel arrangement and a firebox composed of two corrugated marine-type furnaces. The cab is shown set astride the boiler as on the camelbacks of the Reading. This engine was never built, but it was the precursor of what followed, the experimental engine, Number 383.

In November, 1886, the Wilkesbarre shops turned out the second engine of Strong's design, Number 444, named the *Duplex,* and the first locomotive of the 4-6-2 type built in the United States. She was really a remarkable machine, with two cylinders, 20x24 inches each, and two steam and two exhaust valves of the gridiron pattern designed by Mr. Strong. It was claimed that these valves were easily moved, did not require any balancing devices and permitted the use of a light valve gear, one not easily deranged nor requiring much repair. The boiler of the 444 was 58 inches in diameter with 306 tubes whose outside diameter was 1¾ inches. It was equipped with twin circular corrugated furnaces united by a breeches pipe at the forward end and leading to a circular corrugated combustion chamber. No staying of any kind was required and the furnaces and combustion chamber were free to expand and contract without overstraining the outer shell of the boiler. The furnaces were made by the Leeds Forge Company of England under the Fox patent and the remainder of the boiler was constructed at Edgemore, Del., the whole being sent to Wilkesbarre and the engine assembled under the supervision of Alexander Mitchell, superintendent and master mechanic of the Lehigh Valley's Wyoming division. The engine weighed in working order 138,000 pounds and had a tractive force of 23,000 pounds. The valves were worked vertically in seats of circular form by a modified ar-

rangement of the Hackworth gear, employing a single eccentric for each cylinder.

FOR SEVERAL months the 444 was tested on the Lehigh Valley against the 383 and another 4-4-0 type numbered 357, the latter a conventional machine. The tests proved the 444 so advantageous from a fuel saving standpoint that it was decided to exhibit her at the Master Mechanics' Convention in St. Paul, Minnesota. The engine was accordingly made ready and left Jersey City via Pennsylvania trackage, hauling an express train to Pittsburgh where it was turned over to the Pittsburgh, Fort Wayne & Chicago Railway for the run to Chicago and thence to the Chicago, Milwaukee & St. Paul for the last hop to St. Paul. On June 23, 1887, it made a special run over the Northern Pacific to Brainerd, Minn., hauling 14 cars weighing 437 tons. The engine also ran on the Chicago & Atlantic (Erie) between Chicago and Marion, Ohio. On this road the 444 made one of her speediest records of a little over a mile a minute—not too remarkable but her drivers were only 62 inches in diameter. After the convention ended, the engine was brought back to the Lehigh Valley where it was eventually changed to a Ten-wheeler.

In the meantime, Strong had designed another locomotive along the same lines as the 444 but of the 4-4-2 type, the first Atlantic type engine ever to be constructed. The new locomotive was built by the Hinkley Locomotive Locomotive Company of Boston, late in 1888 and bore their construction number 1738. The engine was named *A. G. Darwin* after the president of the Strong Locomotive Company. The cylinders were 19x24 inches, the drivers 68 inches in diameter, the truck wheels 33 inches, the trailing wheels 42 inches, and the boiler 58 inches in diameter with steam pressure of 175 pounds. The weight on drivers was 76,000 pounds and the total weight in working order, 136,000 pounds.

After a tryout on local roads, the *Darwin* came to the New York, Lake Erie & Western Railroad (Erie) on April 1, 1889, and was assigned to trains Number 1 and Number 2 running between Jersey City and Buffalo. These trains usually weighed about 300 tons and the new engine handled them without any trouble over the entire run. The locomotive was capable of making 86 miles an hour, but did not produce any marvelous record on the Erie and after two months of use was transferred to the Reading, where she wrestled 4-car express trains between Philadelphia and Jersey City. In December, 1889, altered to rocking grates for soft coal at the Elizabethport shops of the Central Railroad of

Distinguishing feature of five Strong engines actually built was a stayless firebox. Composed of two circular corrugated furnaces, joined at their forward ends by a breechless pipe that led to a similarly fluted combustion chamber, they expanded and contracted without damage to the outer boiler shell

New Jersey, the *Darwin* was sent west to try her luck.

In the meantime, late in 1887, the Atchison, Topeka & Santa Fe had been impressed with the Strong design and had ordered a six coupled engine from the Schenectady Locomotive Works and a four coupled one from the Hinkley Locomotive Company. Due to financial difficulties, the Hinkley company did not build their engine and the Schenectady order was changed to a four coupled job. This engine was built to the same drawings as the *Darwin* and was numbered 738 on the Santa Fe. Its construction number at Schenectady was 2405 and it was outshopped in September, 1889. Used between Topeka and St. Joseph, it was not a great success and was rebuilt into a 4-4-0 type in 1892, eventually winding up as Number 40.

The *Darwin* continued to be run as an exhibition engine; during April, 1890, she appeared on the Cincinnati, Hamilton & Dayton line, now part of the Baltimore & Ohio. At about the same time, the Strong Locomotive Company acquired a large tract of land about 15 miles from Cincinnati in the Mill Creek valley, intending to erect a modern locomotive building plant with nine acres under cover and capable of constructing one engine a day. But before the plant was built, Mr. A. G. Darwin, the president of the company, died in January, 1892, at Glen Ridge, N. J.

The company was then reorganized as the Balanced Locomotive and Engineering Company with offices at No. 1 Broadway, New York City. Mr. Strong now had further improvements which he wished to apply to an engine. The *Darwin* was sent to the Maryland Steel Company at Sparrows Point, Md., where in 1896 she was rebuilt into a four cylinder compound. The high-pressure cylinders were 16 inches in diameter and the low-pressure ones, 23 inches in diameter, all with a stroke of 24 inches. The low pressure cylinders were outside and connected to the forward pair of driving wheels in the usual manner, while the high pressure cylinders were inside and connected to the crank axle of the same pair of drivers. The crank pins were placed directly opposite the axle crank on the same side, so that when the high pressure piston moved forward the low pressure piston moved backward, balancing the reciprocating parts. The arrangement was the same on each side except that the cranks on one side were set on the quarter from those on the other side. The revolving parts dependent upon the low-pressure pistons and parallel rods were balanced by weights in the wheels; those connected with the high-pressure pistons, by counterweights in the cranked axle.

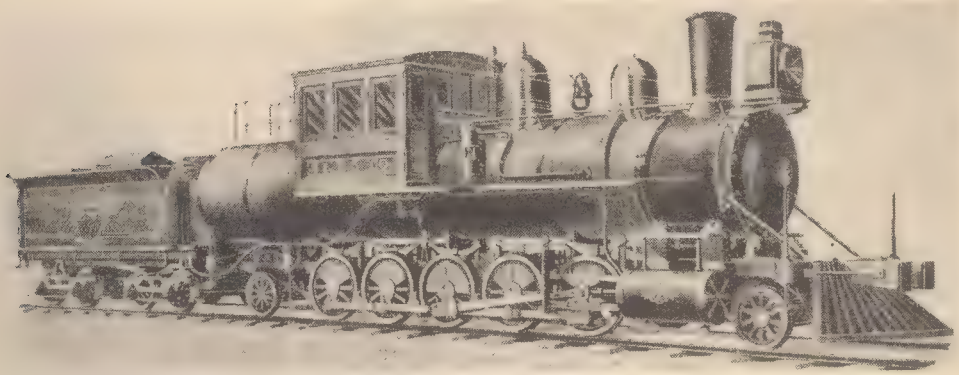
The valve gear was a modification of Walschaerts', one set operating the valves of the Strong gridiron type for a high-pressure and a low-pressure cylinder. The steam was reheated between the high and low pressure cylinders by means of a special reheater devised by Mr. Strong. The boiler from the *Darwin* was used, the only important changes being in the axles, valve gear and cylinders.

After its completion the rebuilt job was sent to the mechanical laboratory of Purdue University where it was thoroughly tested in June, 1897. Test runs on several railroads followed.

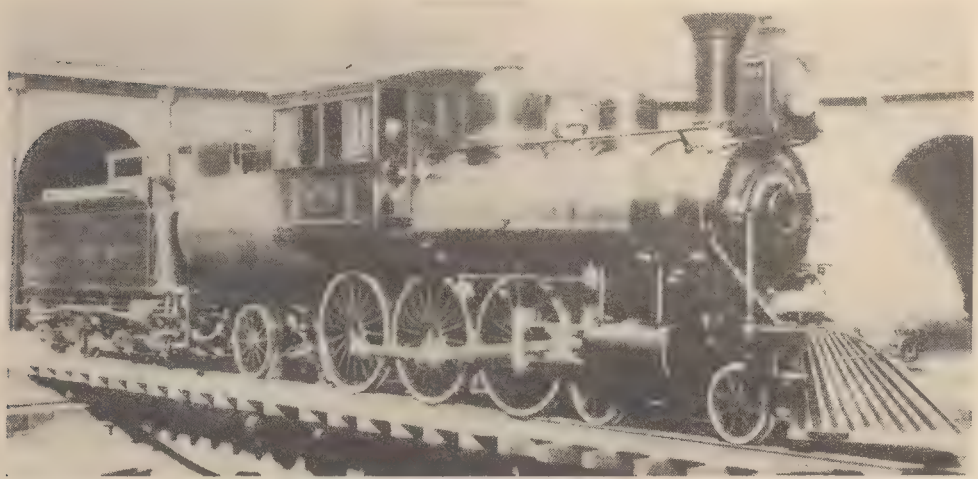
As late as April, 1898, it was tested on the Pittsburgh division of the Pennsylvania Railroad between Altoona and Gallitzin, but its final destination, a scrap dealer's yard in Philadelphia, was reached not long after.

Actually, there were five engines built or rebuilt with Strong's valves: Lehigh Valley 383 and 444, AT&SF 738, the *A. G. Darwin* and the same engine as rebuilt into Balanced Compound Number 1. The remainder of the Strong designs were never constructed so far as is known.

In recent years, we have seen a revival of attempts to break away from the conventional steam locomotive design. Almost without exception, they serve only to substantiate the lessons learned in the past—that the reciprocating locomotive seems adapted to one more or less fixed pattern which, strangely enough, came into its own more than a hundred years ago.



Two other Strong engines which were never built. While the resourceful inventor failed in his greatest effort, he introduced the Pacific wheel arrangement and pointed the way to the 2-10-2 or Santa Fe type. In addition, his gridiron pattern valves were superior to contemporary balanced valves



Widely demonstrated in 1886 and '87, ***Duplex*** 444 captured the imagination of motive power men, but the mediocre performance of succeeding Strong engines wrote *finis* to another chapter in the disheartening story of "Locomotive Oddities"

Victorville

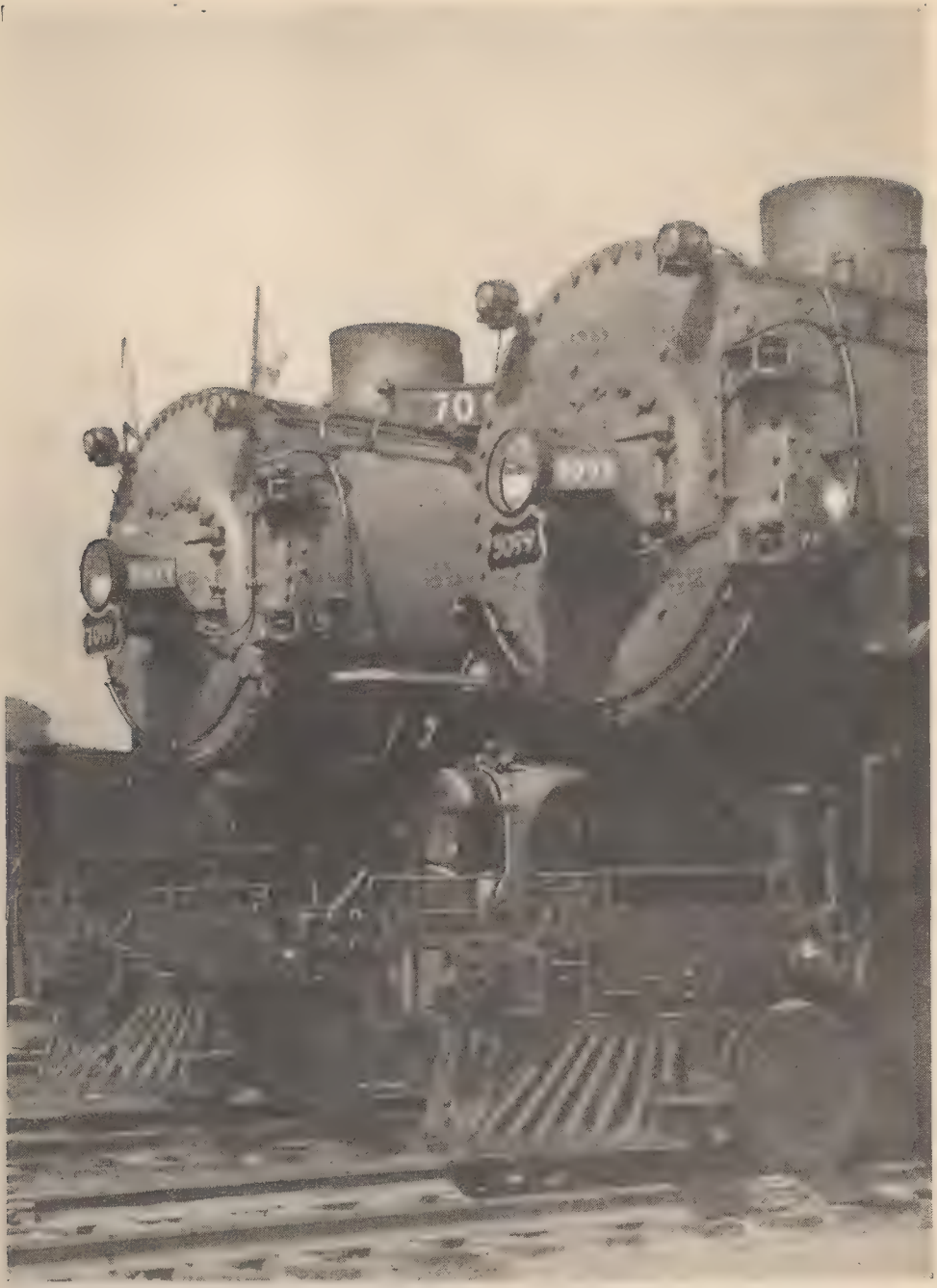
A Photo Story by H. L. KELSO

FOR over seventy years, Victorville has been an important train-order station on the Santa Fe's Los Angeles Division. Midway between Barstow and San Bernardino, east-west limits of the First District, it marks the beginning of the 19-mile climb to Summit, controlling grade for the mainliners and long drags heading for the Pacific Coast via Cajon Pass. Serving both the Santa Fe and Union Pacific on this stretch of jointly-operated trackage, Victorville offers nothing special in station properties; its wooden depot with order boards towering above the bay window, the Morse chattering in the cluttered office, is only standard. Yet because of its helper service, Victorville has long been popular with rail photographers.

Several hundred feet east of the station are the helper tracks: one for the Santa Fe, one for the Union Pacific. Engines in helper service work "first in, first out," regardless of whether a passenger or freight train needs assistance. Union Pacific helpers boost UP trains, Santa Fe locomotives do the same. There have been as many as ten engines lined up there, sometimes none at all, depending upon the amount of traffic heading west.

Helper crews based at San Berdoo start a trick by coupling on to a train and shouldering it over Cajon Pass to Summit. They may cut off and drop back to Berdoo or follow down the eastern slope to Victorville. When a helper is added at Victorville, the train is doubleheaded if its consist is not over 75 percent of the tonnage rating for both the road engine and helper. If the drag is too heavy, the helper is tacked on to the caboose and used as a pusher.

Remember Victorville . . . giant UP *Challengers* tackling the hill with 5000- and 5500-Class 2-10-2s lending their tractive force? Or the 2-8-8-2s, the Union Pacific's most powerful engines west of Salt Lake? Santa Fe used its 2-10-2s as regular freighters and as helpers out of Victorville, and when it really got stuck for power, threw its Mikes and Consolidations into action on the 1.6 grade. Well, take your last look at these mountain haulers. The seventy years are over. Steam and smoke are gone from Victorville.



New faces on the big hill. A year ago both steam and Diesel locomotives were charging the steep grade west of Victorville, Calif., power station for the 19-mile ascent to Summit. Jointly operated by the Santa Fe and Union Pacific, Victorville's helpers numbered Santa Fe 2-10-2s, UP 4-8-2- and 4-10-2s ***above***, plus the heaviest, most powerful steam haulers west of Salt Lake. Today's standard operations are all-Diesel. ***Opposite page***, typical 4-unit Santa Fe helper stands at extreme left

Double take in steam and Diesel. In spite of a 3080 tonnage rating, Santa Fe multiple-unit Diesels stop at Victorville to take on helpers whenever their payloads exceed 2000 tons. Comparable Union Pacific freighters, however, have labored up the 1.6 percent slope with 3000 tons. Fireman C. D. Keesling on Number 3896 heads off this long drag, saluting the photographer with smoke enough for a battleship or a Beebe

Union Pacific extra 3838 roars into Victorville, working steam right up to the water spout where the hogger spots her. Ready for helper service is Engine 3555, a 250-ton simple articulated, tagged for Pocatello the moment Diesels were delivered to replace her. While the *Challenger* type takes water, Number 3555 couples on and after the regulation air test, will be ready for the long pull uphill

There they go . . . Santa Fe work train leaves town with a flanger and hack tacked on to Number 1686, its crew having taken water and time-out for supper at Victorville. Since the recent changeover to Diesel helpers, crews are stationed on the eastern side of the mountain instead of at Berdoo. ***Below:*** Brace of UP articulateds wheel extra 3838 (page 31) toward the Mojave River Narrows, where tracks parallel the river

More and more Diesels in mainline passenger and freight service meant fewer and fewer steam behemoths on the hill. Eastbound Santa Fe ***Grand Canyon Limited*** makes a flag-stop at Victorville to pick up Los Angeles-bound passengers. Diesel 52 is sister engine of Alco's famed 6000. ***Below.*** Union Pacific wastes no time with its non-stop stock extra. Only concession to Victorville is the 30 mile-per-hour speed limitation

Santa Fe gave not only its name but its support to the mighty 2-10-2 type locomotive: its 1930 roster registered 340 Santa Fes. Chief cargo runners were the 3800s, which shared Diesel tratfic and handled the helper chores until lately. Number 3895, posing with Engineer C. R. Davenport ***above,*** exerts an 85,460-pound tractive effort

Facilities at Victorville include two helper tracks: one for the Santa Fe, one for Union Pacific. Like 7019 *right*. UP engines generally take the inside track. Far left is Mikado 2730, assigned to the Victorville-Helendale turnaround. Since Victorville is center of an area manufacturing Portland Cement, a switching crew works a 6-day week, using a UP or AT&SF Mike for a 3-month period

"Big Boy" at Victorville. Union Pacific replaced its helper steamers with one lone Diesel, a red and yellow 2000-horsepower locomotive, delivered by Fairbanks-Morse last September. Tests lasted one week, with (right to left) R. L. Pierce, Clem Hammon and Road Foreman of Engines Frank Stewart in charge. Results indicated that DS 1361 could handle all traffic westward to Summit

The Banana Line

By PHILIP T. LEONARD

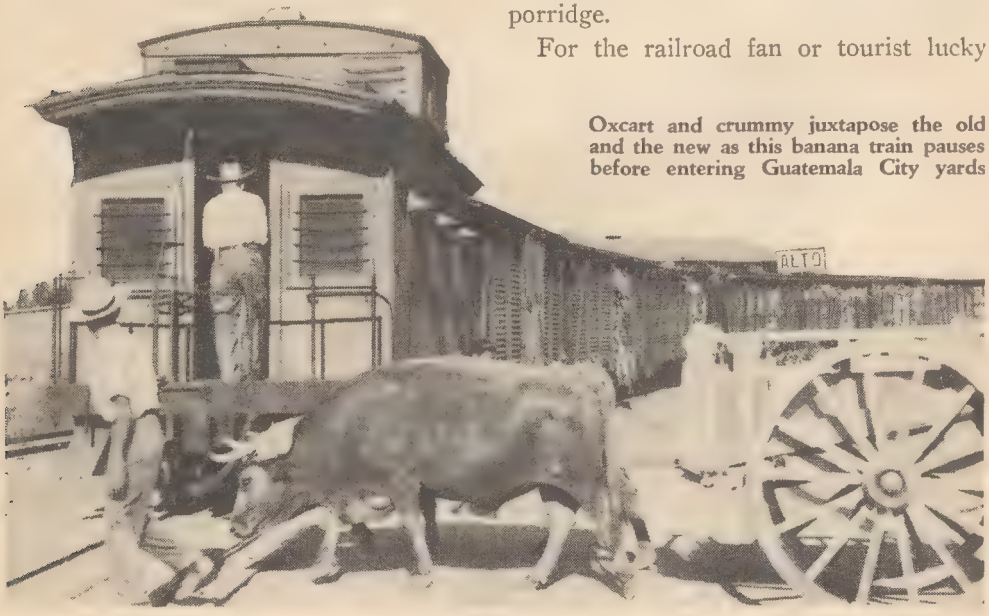
Narrow-Gage Railroading with a Big-Pike Flavor Finally Conquered the Sierra Madres

IT WAS early morning in Puerto Barrios as we stepped from the broad veranda of the Hotel Del Norte and turned toward the station. The Caribbean on our right was a gently swelling mirror reflecting the rose of a tropical sunrise, and as we passed beneath the palms of a tiny park, a parrot swore raucously at us in Spanish. The air in its morning coolness brought in the musty odor of the jungle which crouches in dark brooding beyond the last ragged row of houses.

Barefoot banana workers went padding by on their way to the dock, and before we'd gone far a ragged urchin sidled up, offering to carry our bags for a few pennies. We reached the station and saw our train, light Consolidation Number 107 and six cars—a baggage-mail, four *segunda* and one lone *primera* tacked on the rear end. A whiskered beachcomber who looked as though he'd been tattooed with purple printer's ink hoisted our bags aboard and we settled ourselves in our seats, ready for a ride over the International Railways of Central America, a busy 912-mile system that stretches most of its 36-inch-gage rails through the heart of Maya-land and, together with 197 miles of United Fruit and Compania Agricola plantation lines, forms practically the entire railroad industry of Guatemala. Its 60, soon to be 70, pound iron burrows through dense, monkey-infested jungles, crosses blistering deserts, climbs to almost a mile above sea level and skirts 12,000-foot volcanos in its winding way across the backbone of Guatemala, and one of the principal results is that the breakfast tables of Chicago or Brooklyn or Butte can have creamy-ripe bananas and some of the world's finest coffee with the morning porridge.

For the railroad fan or tourist lucky

Photos by Philip T. Leonard



Oxcart and crummy juxtapose the old and the new as this banana train pauses before entering Guatemala City yards

Running light to Barrios, the 183 meets the 184 at entrance to Guatemala City. Both Mikados, received in March of '47 from Baldwin, head long banana trains

enough to ride over the IRCA, the experience is a memorable one. It is narrow-gage railroading with a big-pike flavor, and its management by Americans has resulted in a slice of American railroading being transplanted to the tropics. Long banana trains rumble over a tailored roadbed that any section foreman could be proud of; heavy Mikes, often three to a drag, bellow a challenge to the tropic skies as they boost their tonnage up 3½ percent grades and around S curves; light Consolidations, turned out twenty years ago by Baldwin, rocket strings of varnish

through green jungle tunnels where bananas and cocoanuts and papaya can almost be reached from the car windows . . . all this laid down in the emerald green of one of the world's most beautiful countries —*that* is railroading in Guatemala.

To better understand the problems, the solutions and the results of the IRCA's operations in Guatemala, it is well to remember that the Sierra Madres, a great range of volcano-spiked mountains, form a sort of off-center backbone dividing the country into what are commonly known as the "Pacific side" and the "Atlantic side," and three-fourths of the line's principal traffic, bananas, must be moved over this range from Pacific-side plantations to Puerto Barrios on the Atlantic side; United Fruit having found it cheaper to make this long rail haul than to load the bananas on boats and ship them through the Panama Canal and up to Gulf Coast or Atlantic ports. The Sierra Madres have been giving railroad planners some of their toughest problems since as far back as 1853.

It was in that year that Guatemala first felt the need for a railroad. The Pacific port of San Jose had just been opened and transportation by oxcart, still common in Guatemala today, was hopelessly slow. Inland Guatemala City was seventy-five miles from the Pacific, two hundred miles from the Atlantic Coast, and those

Above: **Statue of Justo Rufino Barrios, responsible for introduction of railroads to Guatemala, dominates the Plaza before the International's Guatemala City station**

Map, *at left*, shows relation of Verapez Railroad and United Fruit's Cia Agricola to IRCA. Other lines are inactive

Right: **Extra Freight from Puerto Barrios has cleared the Las Vacas viaduct and is headed toward home. She's running extra, but carries no flags**

roads that were little more than trails became impassable during the rainy season. But the wheels of progress are sometimes no faster than the rumbling wheels of the oxcarts, and it was not until twenty years later that the government, under Justo Rufino Barrios, for whom Puerto Barrios is named, signed a contract with an American, Marck J. Kelley, to construct a railroad from San Jose to Guatemala City.

This undertaking failed financially, but President Barrios, unwilling to shelve his dreams of a modern transportation system, negotiated another contract in 1877 with one William Nanne to build a 28-mile line from San Jose to Escuintla, the latter a fruit center and site of some popular hot springs.

Construction started June 20, 1880, with a celebration which seems to have been justified this time because less than a month later another contract was signed with the same firm to continue the line the rest of the way to Guatemala City. By 1882 the construction gangs had reached an altitude of some 4,500 feet and were building through Palin Pass at the foot of 12,300-foot Agua Volcano. They soon reached Lake Amatitlan and there Latin tempers were strained to the breaking point, for the size of the lake and the rugged nature of the country around it made it necessary to cross the water. But it was done, at a tremendous cost in money, effort and Indian perspiration, and the first train, pulled by a flower-decked, diamond-stack wood-burner, steamed in triumph into Guatemala City late in 1883, signifying completion of the first leg of Guatemala's railroad system.

Industrial production, agriculture and rail traffic spiraled upward upon completion of the San Jose line, called the Guatemala Central; in the meantime, American capital was building another three-foot-gage line, the Occidental Railroad, inland from Champerico, the second most im-

portant port on the Pacific Coast. It took two years to put the Occidental's forty-two miles through jungle and lowlands to the town of Retalhuleu, but when the first locomotive entered that town on the Fourth of July, 1884 (the day meant little to Guatemaltecos but was celebrated in honor of the Americans who built the line), a rich lumber, coffee, cocoa, rice, cotton and sugar area had been opened. When the Guatemala Central completed a branch line from Santa Maria to Mazatenango and Retalhuleu in 1900, the Occidental then had a direct connection to Guatemala City.

A third line, the Ocos Railroad, was built inland from the Pacific port of Ocos to Ayutla in 1898 and was connected with the Guatemala City line in 1915. An international bridge at Ayutla was built across the Suchiate River between Guatemala and Mexico in 1942, and the Mexican Central's standard-gage tracks now cross the bridge to a station on the Guatemala side where freight and passengers change to or from the three-foot IRCA. The bridge, damaged by floods some time ago, has been repaired and service was restored in February of 1947. This makes it possible, incidentally, to take a solid rail trip from almost any point in the United States, say Bangor, Maine, or Bellingham, Washington, if you're a genuine railfan, to Cutuco in El Salvador, within thirteen degrees of the Equator. Or, if you really love to ride the iron trail, you can start your trip up in the Peace River district of Canada.

It was these three roads—the Central, the Occidental and the Ocos—that were merged with the Northern Railroad on the Atlantic side in 1912 to form the IRCA, or Ferrocarriles Internacionales de Centro America, a heavy-tonnage name that explains the lettering seen on IRCA equipment. That all these lines were built as three-foot gage probably resulted from the influence of Minor C. Keith, a railroad builder of the last century who dreamed of a line to connect North and South America and considered every railroad in Central America as a potential link or feeder for this dream road. Thirty-six inches was the gage he had chosen.

On the Atlantic side, where our tour of the IRCA started, work progressed more slowly on the 198-mile stretch through jungle, desert and mountains from Puerto Barrios to Guatemala City. In 1883 the government, under Barrios, issued a decree for the construction of a line to be known as the Guatemala Railroad. Some fifteen miles of 33-pound rail were actually laid, but work was being directed by the government, and when President Barrios died and financial and political difficulties arose, construction was abandoned. The 33-pound steel, which could never have supported the heavy engines that now pound over the system, was ripped up, and those rails can be seen in use today serving as poles for the railroad telegraph line.

CONSTRUCTION started again, this time with heavier rail, and around 1894 the line emerged from the steaming, lowland jungles of the Atlantic Coast and reached the desert town and fruit center of El Rancho on the Motagua River, sixty-two miles from Guatemala City. But the government ran out of money again and had to suspend operations. The property was leased to a private company but business did not live up to expectation and to make ends meet the company had to operate without charging anything up to maintenance expenses. Naturally, the road soon went to rack and ruin.

In 1904 the government entered into a contract with Minor C. Keith and associates to repair and complete the line, and by January 18, 1908, the rails had scaled the steep slopes of the Sierra Madres to Guatemala City and made connection with the Guatemala Central, thereby providing through rail service from the Atlantic to the Pacific. Justo Rufino Barrios did not live to see the completion of his country's railway system, but because of his efforts to create that system, he has gone down in history as "The Reformer"

Las Vacas viaduct, two miles east of Guatemala City, is IRCA's largest bridge, 743 feet long and 240 feet above the bottom of the *barranca*. That's Baldwin Consolidation 159 dragging Number 12 into Puerto Barrios

and his statue today dominates the plaza in front of the Guatemala City station.

The Puerto Barrios line, originally known as the Northern, or Guatemala, Railway, has three tunnels, varying in length from 503 to 785 feet, and 264 bridges including 743-foot Las Vacas viaduct two miles east of Guatemala City. For almost seventy miles the line runs through hot jungle and plantation country where great moss-hung trees filter the sun's rays to a green twilight and the Motagua River moves on its silent way to the Caribbean. Banana trees, heavy with fruit, line the right-of-way, and brilliantly plummaged jungle birds are seen like the sparkle of gems through the dripping foliage. It is a dark, somber country, stirring with the current of unseen jungle life, and the railroad threads its corridors like a small, noisy intruder.

The line finally emerges from the jungle into the brilliant sunshine of the desert, and, still following the Motagua River, reaches the junction town of Zacapa where an IRCA line branches off to go to the neighboring Republic of El Salvador. There is a roundhouse and small yards at Zacapa and on any day, providing he doesn't get sunstroke, a railroad fan can photograph Mikes, Consolidations, Ten-wheelers, and banana and passenger trains (ten of the latter stop there daily) against a background of mesquite, giant cactus and the distant purple of the Santa Cruz Mountains. A thirty-minute meal stop allows considerable photography if the fan is willing to buy his vittles from Indians along the way in lieu of a meal at the hotel. But that's merely a suggestion, not advice; and if a cockroach rears up in your boiled eggplant, just remember the nice pictures you got, anyway!

Out of Zacapa the going is fairly level to Rancho, sixty-two miles from Guatemala City; but from there the narrow-gage engines have to dig in, for the line climbs abruptly off the desert floor with a 3.3 percent grade and a spectacular series of S curves and spidery trestles that leave the tourist gasping. In the first six miles out of Rancho the line soars 888 feet, and it is a blood-tingling sight to watch two or three heavy Mikados boost a long drag up that winding route, their stacks sending columns of smoke into the azure sky and the roar of their exhausts racketing through the hills. From the shade of a giant cactus you watch this scene and you say to yourself, "Brother, *this* is railroading. *Si hombre!*"

The line continues to climb with a generally 3 percent grade to Menocal, 4935 feet above sea level and the highest point on the Barrios line. The jungle and desert have been left far behind, the temperature has probably dropped to somewhere in the high sixties and the track winds through lush, green highlands. Menocal cut, 1800 feet long and with a 54-foot maximum height, discovers a panoramic view of Guatemala City, and the traveler arriving in the evening on Number 1 may be treated to the magnificent view of a sunset silhouetting three of Guatemala's highest volcanos. The air is now clear and cool and pungent with the odor of pine, spice and a thousand flowers, and the light passenger Consolidation, although it may have stalled once or twice on the way up from Rancho as 107 did with the author's train, now drifts down-grade across Las Vacas viaduct and into Guatemala City.

The 198-mile ride on the Barrios line, while the most interesting because of its panorama of jungle, desert and mountains, has no monopoly on grades. On the Pacific side, an engine Guatemala City-bound out of San Jose or Ayutla has fairly easy going as far as the roundhouse and junction town of Escuintla, fifty-eight miles from Guatemala City; but from there on any engine would need its second wind. Immediately out of Escuintla is a 3.6 percent grade which continues for nine miles, then increases to 3.7 percent, and in one place the line climbs 874 feet in five miles, the steepest pitch anywhere on the IRCA. The company figures on one road engine and three helpers to boost twenty-eight loaded cars up grades like this, but even

It takes a wide throat and a slow gurgle to down 35 hundred gallons of water. Mikado 179 is one of 18 United Fruit-owned locomotives assigned to IRCA iron. *Below:* 176 rolling into suburban Pamplona with Train 5, Mazatenango-bound. Meet the native red cap at extreme right

on trains operating from mile-high Guatemala City to either coast, two or three engines are often used because the rugged terrain offers frequent steep climbs although the general run of the line is down-grade.

At a lesser angle the line skirts the foot of lofty Agua Volcano, runs through Palin Pass—used by planes as well as trains crossing the Sierra Madres—and crosses Lake Amatitlan. Then comes a horseshoe curve, a couple of more steep climbs and, finally, Pamplona, 5000 feet above sea level and the highest point on the IRCA. From there the final 2½ miles into Guatemala City is an easy downgrade drift.

Few railroads anywhere have such a variety of topograhy and climate in so short a distance as the International. From the steaming murk of lowland jungles, through sun-drenched desert to the high, clean air of the Sierra Madres, this 3-foot-gage pike transports its bananas and coffee and trade goods and people on exacting schedules. On the Puerto Barrios line, the rails running through the Sanarate River canyon, crossing that river fourteen times, and then through the Agua Caliente and Platanos River canyons, would bring a touch of homesickness to any veteran of the Rio Grande's narrow gage.

Mikado 150 has been pounding the rails since 1928, between Puerto Barrios and the Tiquisante plantations. This is a pause for her and a long string of empties at Guatemala City yards

Traffic is heavy, due partly to the movement of coffee and bananas, and Compania Agricola de Guatemala, a subsidiary of United Fruit and operator of its Pacific-side plantations, is the IRCA's best customer. The banana traffic started in 1906 when the United Fruit Company established the first plantation on the Atlantic side and increased rapidly until now over eight million stems a year are exported from Guatemala, all of them being handled

over the lines of the IRCA. Seventy-five percent of these bananas now come from Agricola plantations, established a few years ago to escape the sigatoka disease which once threatened destruction of the industry on the Atlantic side. The bananas are loaded on the cars scattered over a network of 3-foot-gage plantation lines centering around Tiquisate and connecting with the International's Ayutla line at Rio Bravo. Small Agricola engines haul the cars up to Rio Bravo where a heavy IRCA or Agricola Mike (eighteen of the latter are assigned to service exclusively on the IRCA) takes them to Guatemala City and Barrios. As previously mentioned, all bananas from both sides of the mountains move out through Puerto Barrios. The Agricola's plantation lines at Tiquisate are strictly a private affair representing eighty-one miles of wandering 70-pound rail with numerous spurs and sidings, three small oil-buring engines, a shop and a roundhouse, but the IRCA operates daily mail, freight and passenger service over the line from Rio Bravo to Tiquisate.

On the Atlantic side the situation is slightly different. United Fruit, under its own name, operates the plantations and railroad, the latter branching off from the IRCA's Barrios line at Quirigua and rambling for twenty-four miles through banana country, rejoining the IRCA at Bananera. With stubs and branches, this United Fruit Company line represents 115 miles of track and touches small stations whimsically named for North American Indian tribes — as Creek, Blackfoot, Apache. Here, too, the International operates six-days-a-week commercial service over the private lines, and banana cars are hauled by small United Fruit kettles to Bananera where the main-line jacks can pick them up.

BUT chances are the banana you'll have in the morning came from Tiquisate on the Pacific side. Chances are it was loaded into an iron-sided car at Alotenango or Ixtepeque and trundled through the jungle to Rio Bravo, then took a long ride behind a snorting Mike through some of the most beautiful country in the world, and wound up at last in a ship's hold at Puerto Barrios. It has probably had a solid three-hundred miles of slim-gage steam railroading, so take a good look at it; that banana has been places!

Bananas, while important to the International Railways' income, are by no means the only source of revenue. Until 1906 coffee and sugar led the traffic list, but today bananas and coffee are the leaders with sugar, raw rubber, general merchandise, hides and livestock following. The average freight train, however, is likely to include traffic as varied as the New York Central might haul, and the line which branches off at Zacapa to go to Salvador (opened in 1930 and known as the Salvador Division beyond the border), handles sugar, henequen, oils and general merchandise.

Passenger traffic consists mostly of large numbers of Guatemaltecos who seem to travel perpetually from one side of their country to the other, comfortably filling six to eight passenger cars on every train, eating constantly en route and drinking gallons of beer and pop. With the passenger boats again operating, an increasing number of tourists are entering the country through Barrios or San Jose, and the railroad is sprucing up its all-steel salon cars to take care of this traffic. Certainly a ride over the IRCA is an excellent introduction to a country of magnificent scenery and with a history as mysterious as the very origin of mankind.

A glance at the *Guide* will show some thirty-four passenger and mixed trains on the International, most of them daily. The average train carries six or eight *segunda* cars with wooden seats facing each other, a *primera* or salon car with cane or leather seats, and a baggage-mail car complete with R. P. O. The crew consists of engineer and fireman, conductor and three brakemen, and, on mixed trains, a couple of freight handlers to expedite train movement at small stations. A news butcher

Passengers on the mixed local hear the first call for lunch in this jungle town on the Puerto Barrios line. Pauses are brief, despite the fact that the local carries no diner, for even the hungriest understand that transporting the banana in a hurry is more important than passenger comfort

also rides every train but faces stiff competition from the Indian women who come alongside at every station, baskets on their heads piled high with boiled corn, eggs, fried chicken, breads, candy and fruit.

Passenger train speeds are limited to thirty miles an hour on tangents, twenty-five on curves, and freight train speeds are twenty-five and twenty, respectively. Hardly *Broadway Limited* running, but in a country where a large share of the nation's goods is still carried on men's backs, and life moves at a more leisurely pace, mile-a-minute speeds are not necessary. Besides, these comparatively low speed limits allow brakemen to safely ride the tops of freight cars, keeping a closer eye on the train and watching for visual signals. Most engines are not equipped with train signal devices.

The 1942 summary of rolling stock on the International Railways, including the Salvador line, shows forty-three *primera* and seventy-nine *segunda* coaches, fourteen special and chair cars, thirty-two baggage and mail cars, and sixteen combination coaches. Passenger cars are lighted by kerosene or electricity (the former are now being electrically equipped), and are equipped with air brakes, and have an average capacity of fifty persons, except chair cars which seat only twenty-four. Most are of wood construction, were built in the States, and are now gradually being rebuilt in the Guatemala City shops.

Freight equipment, by the 1942 figures which are still reasonably accurate, include 761 boxcars of twenty to twenty-five tons' capacity, 318 flatcars of twenty tons, 789 banana cars, 108 stock cars, sixty-nine tank cars, forty-three cabooses, and a handful of coal, meat and mixed cars, and two reefers. Banana cars have an average capacity of twelve tons and consist of the car bed and a steel frame with corrugated iron sheets extending three-fourths of the way up the sides. This leaves about a two-foot open space around the top of the car, giving the bananas the ventilation they need in transit. In loading a banana car, palm leaves and stalks are used as a sort of dunnage to protect the fruit. Loading and unloading is done by hand, although huge mechanical conveyors transfer the bananas to the ships' holds at Puerto Barrios. It is important to keep the time in transit to a minimum, which is the reason banana trains coming up from the Pacific side stop at Guatemala City only long enough to change crews and engines and have a brief inspection before the train continues to Barrios.

Portrait of a bakehead. Jose, at right, has seen revolutions come and go without too much anxiety. The only serious job he knows is that of firing his oil-burner. It takes efficiency to bring Number 5 into Mazatenango, 115 miles away, by 9:10 tonight

Below: Waiting for the roundhouse, still uncompleted, at the junction town of Zacapa, is slow business. Meanwhile, engines must stand the weather. It can't be too bad, for Consolidations 62 and 70 date from 1909 and '14, but still gleam in the brilliant afternoon sunlight

The fishing business, a comparatively small industry that shows promise of expansion, may create a demand for more reefers. Fish caught off San Jose and Champerico, and along the Carribbean Coast, are already being shipped to Guatemala City and the volume will undoubtedly increase. Likewise, there will probably be an increase in the movement of forest products, minerals and manufactured goods as Guatemala's vast resources are further tapped. In all this the International Railways should get a large share, for Guatemala's highways are still mostly undeveloped and there are no competing railroads. The Verapaz Railway is, in fact, the only other line in Guatemala, and its twenty-eight miles of three-foot steel serve only the coffee district of Coban, with a weekly train making a water connection with the Carribbean port of Livingston.

BUILT in 1896-97 with German-American capital, the Verapaz passed entirely into German hands in 1922. In

1941 the Guatemala government took over and soon suspended operations when a highway was completed paralleling the railroad.

The highway (a term which is used advisedly in Central America) turned out to be something less than the Pennsylvania Turnpike, and when the war prevented repair or replacement of highway equipment, the Verapaz was brought back to

Daily stint in the Guatemala City yards is still performed by this 1890 Baldwin-built Ten-wheeler. Minus train signal equipment, she sports Stephens valves, Westinghouse brakes

LOCOMOTIVES OF THE INTERNATIONAL RAILWAYS OF CENTRAL AMERICA

Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
			2-6-0 (Mogul) Type			
48–53	16 x 20	40	150	74,000	13,600	Baldwin, 1905
79–81	15 x 20	42	135	64,000	12,700	Baldwin, 1904
			4-6-0 (Ten-wheeler) Type			
55	15 x 18	44	145	60,000	12,000	Baldwin, 1896
*56–58	17 x 20	40	180	96,500	22,000	Baldwin, 1912
			2-8-0 (Consolidation) Type			
34	15 x 20	38	180		18,100	Baldwin, 1905
36–38	16 x 20	38	180	93,400	20,600	Baldwin, 1913
39–44	16 x 20	38	180	93,400	20,600	Baldwin, 1919-21
60	16 x 20	40	175	87,000	18,500	Baldwin, 1896
61–73	16 x 20	38	175	91,000	20,500	Baldwin, 1909-14
76	16 x 20	37	135	6,800	17,600	Cooke, 1884
101, 102 & 108*	17 x 20	40	180	102,800	20,800	Baldwin, 1925-26
*109–111	16½ x 20	40	180	102,800	20,800	Baldwin, 1926
*112	17 x 20	40	180	102,800	20,800	Baldwin, 1926
103–107						
112–125	17 x 20	40	180	102,800	20,800	Baldwin, 1925-26
			4-4-0 (American) Type			
84	12 x 18	42	140	44,000	7,346	Baldwin, 1876
			4-6-0 (Ten-wheeler) Type			
86–87	17 x 20	42	170	86,000	20,400	Baldwin, 1890
90 & 94	17 x 20	42	175	88,000	20,400	Baldwin, 1894
91 & 93	17 x 20	42	175	92,500	20,400	Baldwin, 1895
95–98	17 x 20	42	175	92,500	20,400	Baldwin, 1895-01
99–100	17 x 20	42	175	96,500	21,050	Baldwin, 1910

Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
			2-8-2 (Mikado) Type			
*126–129	16 x 20	40	185	105,490	20,100	Baldwin, 1928
*150–153	18 x 22	40	175/180	139,200	26,500	Baldwin, 1928
*154–156	18 x 22	40	175	147,000	26,500	Porter, 1930
*162–174	18 x 22	40	180	141,300	27,265	Krupp, 1937
*157–161	18 x 22	40	180	146,300	27,265	Baldwin, 1936-37
*175–186	18 x 22	40	180	146,300	27,265	Baldwin, 1946-47
			2-6-6-2 (Mallet) Type			
*250–521	15 x 22	42	240	236,300	42,100	Baldwin, 1926-28

**Equipped with superheater—Salvador Division*

life, and to date still operates its weekly train from Panzos to Pancajche.

German capital also built another railroad in Guatemala back in 1924, but with considerably less logic than was used in building the Verapaz. This line was called the Ferrocarril de los Altos and it extended from the end of an IRCA branch at San Felipe to the town of Quezaltenango. But there were several things wrong. In the first place, its only rail connection was with the IRCA, and the IRCA was, always had been, and probably always would be, three-foot gage. The Ferrocarril de los Altos was standard gage! So all freight had to make a car-to-car transfer at San Felipe. In the second place, the Ferrocarril de los Altos, without a practical connection with the International Railways, ran from nowhere to nowhere. Then, the line had grades up to 9 percent, curves that could better have been called corners, and an $8,000,000 investment in its twenty-eight miles.

The entire line was finally opened to traffic in 1930 and the naive Guatemalan government, for whom the Germans had built it, was introduced to the business of operating a railroad. They gamely went through with it, losing money faster than a high-bracket taxpayer, until, in 1933, washouts and landslides so seriously damaged the line that the government, with a sigh of relief, abandoned the whole thing. The power plant now provides electricity for nearby towns, and the rolling stock and motive power are said to be rusting away in Quezaltenango. Around the National Palace they are still wondering why the Germans built to standard gage.

The death of the Ferrocarril de los Altos left only the Verapaz and the IRCA to

The house that Jack built had less history than the thirteen Mikados Krupp built from Baldwin plans to pay for bananas that Germans ate. Number 158 resembles them, but is a true Baldwin product of the same year, 1937

serve a country approximately the size of Tennessee, and although there are 4,240 people and fifty-eight square miles for every kilometer of railway in Guatemala, the lack of rail transporation is not as real as those figures would indicate. Nine-tenths of the people are engaged in agriculture and scattered over wide areas, and there are few large towns (Guatemala City, 166,000; Quezaltenango, 23,000; Zacapa, 8,000).

It seems then that the existing lines of the IRCA provide all the railway mileage that Guatemala can economically support. Even on this well-planned road heavy rains and torrential streams during the wet season which extends, roughly, from June to November, increase maintenance costs. Hundreds of carloads of rock are used to repair washouts and thousands of carloads of material are handled yearly.

All the main line is ballasted with stone and gravel, but at one point on the Zacapa-Salvador line, and for a few hundred yards on the Barrios line at Joya, eighteen miles from Guatemala City, the rails run on a bed of obsidian.

Bridges and tunnels were another big item in the cost of building the IRCA's predecessor lines, and their maintenance requires plenty of work today. In Guatemala the International has 524 steel bridges adding up to 34,583 linear feet, plus 153 rail spans now replaced by reinforced concrete slabs. Of this total, 264 are on the Barrios-Guatemala City line, and 275 on the Guatemala City-Ayutla line. Only the 13-mile Ayutla-Ocos branch, running through the jungle with a maximum elevation of only seventy-one feet, has neither bridge nor tunnel.

But the Zacapa-Salvador branch has more than its share of the latter. Of the fourteen tunnels on the International's Guatemala lines, eleven are located between Zacapa and the border, nine of them in one seven-mile stretch, and they vary in length from seventy-three to 497 feet.

Station buildings on the International Railways are mostly of wood or of wood and concrete. The frame-and-brick structures that originally housed station and offices in Guatemala City were completely destroyed by the earthquake of 1918, and the huge frame station that was built to replace them now houses traffic, telegraph, and executive offices, *primera* and *segunda* waiting rooms, separate ticket offices for the two classes of tickets, baggage and express rooms, a cavernous train shed with four tracks, and a freight department. There are no tracks passing through the station and all trains must back in or out through the coach yards and past the roundhouse, rip track and shops to the main line. The freight department, occupying a section of the building on the far side of the train shed from the waiting rooms, includes a team track, loading platforms, and storage space.

Stations at San Jose, Barrios, and other points in the tropic lowlands are built mostly of concrete or set on concrete "stilts" as a protective measure against moisture and termites. Creosoted ties were once imported, but in recent years locally produced hardwood ties have been used as much as possible.

Other IRCA facilities include the railroad-owned docks at San Jose and Puerto Barrios, fuel oil storage facilities at both those ports, eighty-five small pier cars at San Jose, and forty-six steel and two concrete water tanks scattered throughout the Guatemala lines.

You will look in vain for automatic block signals when you ride the IRCA. All semaphores are hand-operated and all switches in yards and along the line are manually operated. Nor do trains carry extra markers. All freights run extra, but the white lights and flags are not used. You will, though, see a solid job of slim-gage steam railroading being done upon a background of some of the most glorious country in the world. And you will see a railroad that is rich in the interesting and the unusual—like the Krupp Mikados built from Baldwin plans and paid for with bananas.

Switching scene near the desert town of Rancho in the Sierra Madres foothills. Number 183, at center, a new Mike delivered in March of '47, is heading into the clear on the Puerto Barrios line

They were acquired a decade ago in a sort of international horsetrade growing out of the fact that Germany had purchased some bananas but the German government took a dim view of the practice of letting cash go out of the country, even to pay for bananas. So locomotives were handed over instead, built by Krupp from plans borrowed from Baldwin. Compania Agricola, the creditor in the deal, is satisfied though; Teutonic jaws have long since munched the bananas, but the Krupp Mikes (numbers 162-174) with Agricola's name on their tenders, continue to yank bananas over the big hump from Rio Bravo to Barrios.

With a comfortable future in sight (there seems little danger that the world will stop drinking coffee or eating bananas), the International is putting in 70-pound rail, enlarging yard facilities, and thinking of new equipment. There will probably be no great expansion in railways anywhere in Central America, and Minor C. Keith's dream of a North-to-South America railroad may never be realized, but there is plenty of business for existing lines and the IRCA is mulling over the idea of buying some 2-8-8-2 Mallets. Mallets or Diesels.

Railroad fans everywhere will probably kneel and pray that it may be Mallets. For what sputtering Diesel could match the sight of a couple of 2-8-8-2s climbing the Sierra Madres, black smoke building columns in the tropic sky, and the boom of their exhausts thundering across *barranca* and desert? What Diesel could pack the romance of a Mallet snaking a long string of banana cars through the green twilight of a jungle corridor where machete-swinging Indians pause to wave to the hogger as he leans from the cab window? None, we agree, and we shall pray that Mallets will finally be chosen to uphold the tradition of steam-and-steel railroading.

ALONG THE IRON PIKE

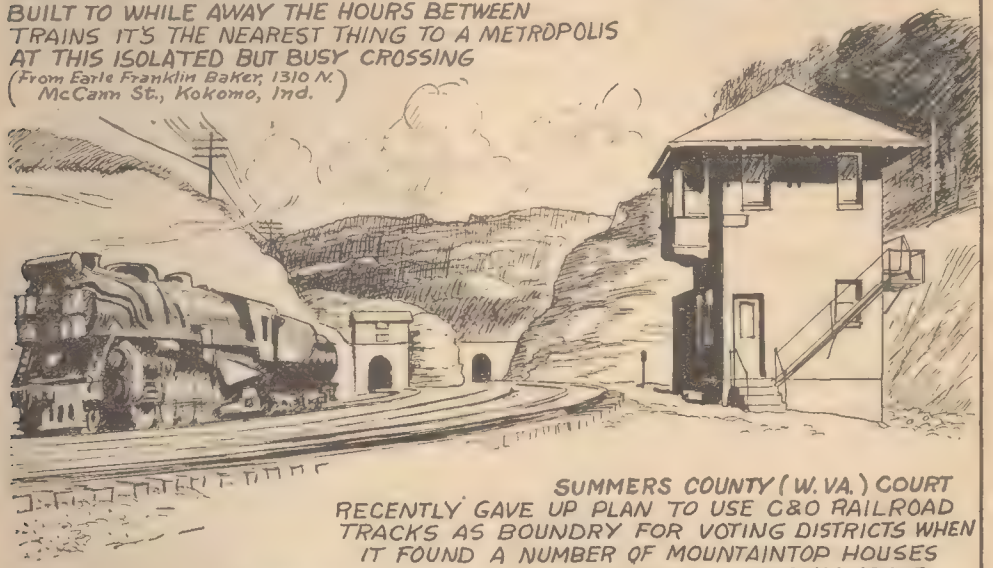
by JOE EASLEY

COMMUTER-HECKLED LONG ISLAND RAIL ROAD TOOK NOVEL METHOD OF PROMISING PUBLIC BETTER SERVICE WHEN FIFTY BRIGHTLY-COSTUMED COLLEGE GIRLS PASSED OUT 2000 "DEAR CUSTUMER" LETTERS AT METROPOLITAN STATIONS THIS SPRING (From George R. Kelly, 639 Park Way, Monessen, Pa.)

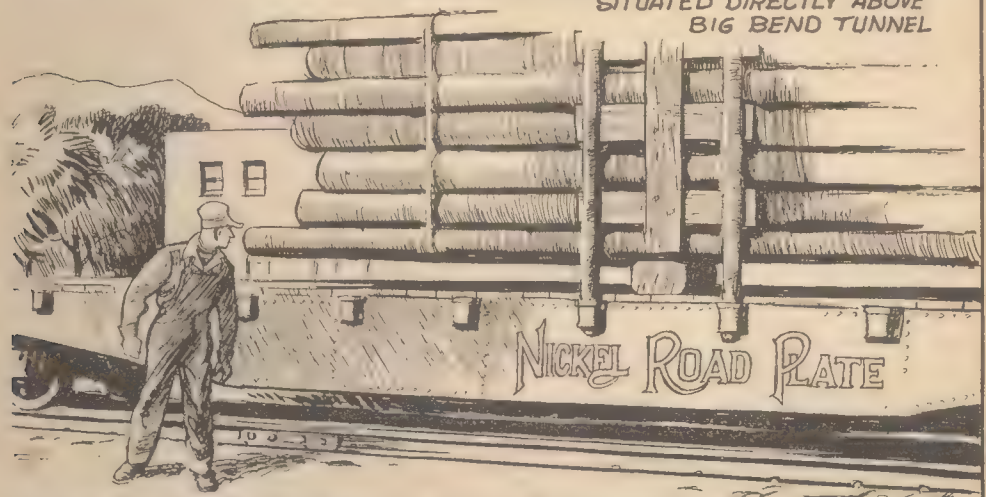
VARIATION OF RULE G. STRUCK BY FLYING BEER BOTTLE AS HE BROUGHT A DRAG THROUGH FRESNO, CALIF. AT RESTRICTED SPEED, ESPEE ENGINEER ALBERT BIGGS BLACKED OUT; WAS REVIVED BY FIREMAN AND BRAKEMAN AFTER TRAIN HAD TRAVELLED 300 YARDS THROUGH HEART OF CITY (From Arch Billings, 919 Olive St., Anaheim, Calif.)

NEXT TIME YOU PASS THROUGH KOKOMO JCT., IND., ON THE PRR OR CLOVER LEAF, LOOK FOR TOY VILLAGE BEHIND THE SWITCHMAN'S SHANTY. BUILT TO WHILE AWAY THE HOURS BETWEEN TRAINS IT'S THE NEAREST THING TO A METROPOLIS AT THIS ISOLATED BUT BUSY CROSSING

(From Earle Franklin Baker, 1310 N. McCann St., Kokomo, Ind.)

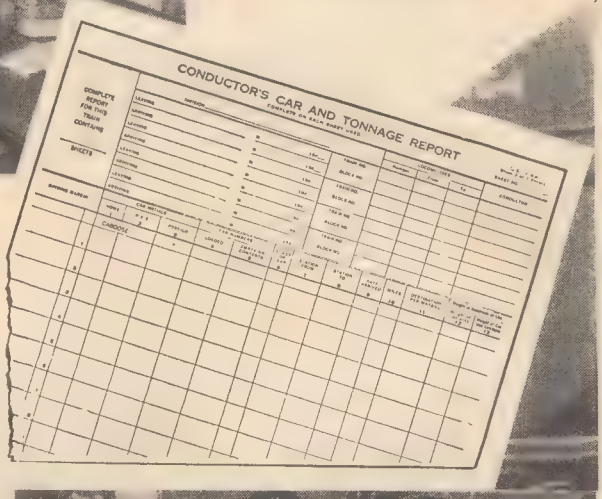


SUMMERS COUNTY (W. VA.) COURT RECENTLY GAVE UP PLAN TO USE C&O RAILROAD TRACKS AS BOUNDRY FOR VOTING DISTRICTS WHEN IT FOUND A NUMBER OF MOUNTAINTOP HOUSES SITUATED DIRECTLY ABOVE BIG BEND TUNNEL



SCRAMBLED STENCILS: "NICKEL ROAD PLATE" LEGEND APPEARED ON NKP FLAT CAR 2730 WHEN SHE SHOWED UP WITH DOUBLE LOAD OF TELEGRAPH POLES AT SALIDA, COL., RECENTLY (From photo by Ted Mamwaring, 35 E. 30th St., N.Y. City 16)

Light of the Lantern

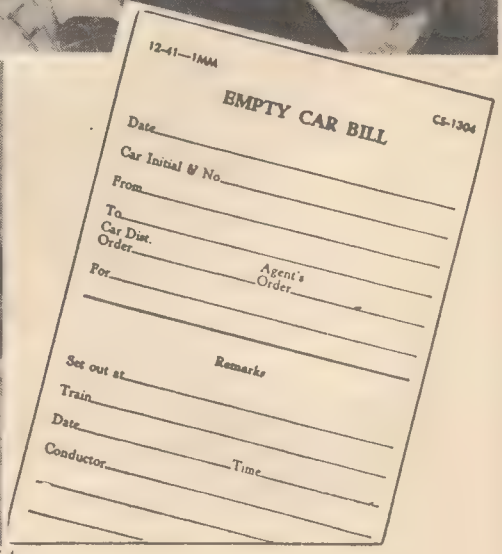


Where Is My Freight?

WHERE is my freight? A shipment left New Orleans three days ago —when will it arrive? What length of time is required to move a shipment from New York to Montreal? What is the rate on household goods

By J. A. THOMSON

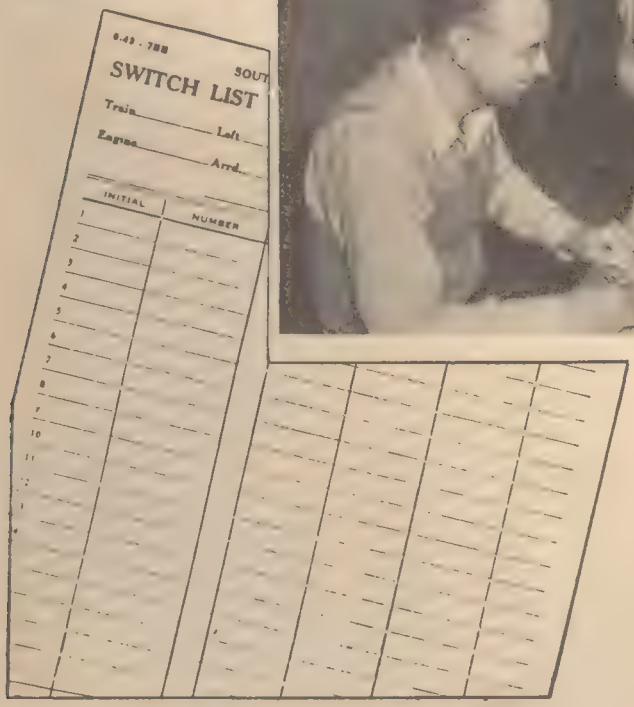
All photos and freight forms courtesy of Sparky Heilbron and Southern Pacific



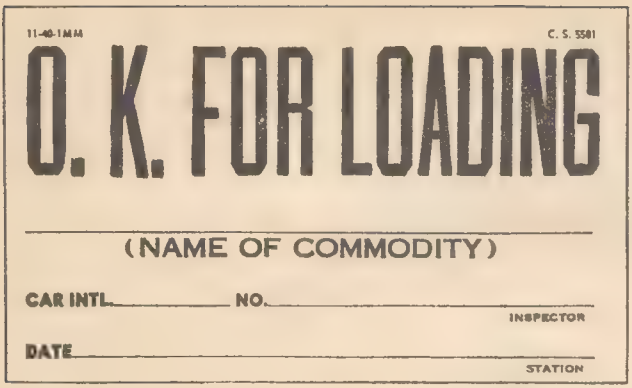
from Kansas City to Boston? I have a shipment for your pick-up and delivery truck, what time will it be here?

And so it goes. Day in and day out the same questions are asked and answers given, in an endless stream, at any busy freight terminal, by trained and efficient staffs.

Usually in one section of any large freight office may be found the *chief advising clerk* and his able assistants, checking the rates and extending the freight charges of incoming waybills from near and far. In most cases, the *chief* has a wide experience and possesses so fertile a brain that many precious minutes are saved by his committing most of the rates to memory. Watching him check the numerous combination of rates applicable through the various gateways on, let us say, a car of tomatoes from Mexico or of vegetables



Tons of paperwork keep freight shipments rolling smoothly from points of origin to distant destinations. From conductor's switch list, on inbound trains, clerks make out tags for each car. Tags bear large station-identifying numbers and are tacked to boards on car doors with magnetic hammers. Checker jots down numbers as cars proceed up lead; records stored in *Jumbos* give times of arrival and departure, receiving points and destinations



Dozens of special instruction tag forms furnish spot information to switch crews and freight handlers. Present tendency is toward standardization on all roads, with emphasis on simplicity

and fruits originating in the southern United States, is an education in itself. In addition to the *chief's* assistants, there is a small army of advising or typist clerks, transferring every item of information from the waybills to freight bills—more commonly known as advice notes. Other members of the advising staff are re-checking the advice notes for possible errors. These bills must be accurate. Another clerk will be found marking the "shed locations" on the bills to avoid delay in locating the various shipments so eagerly required by the railroad patrons. As a railroad never sleeps, a similar, but somewhat smaller, night staff is maintained to prepare shipments arriving during the dark hours for speedy delivery the following morning.

A comparatively recent innovation, and a precedent in railway offices, is the night telephone staff in communication with other large freight centers. This is a new development which came to the fore with the general speedup of freight train schedules.

As freight waybills usually are sent by baggage train mail between large freight terminals, it was found the freight would arrive at its destination and cars placed for unloading before the waybills had been received. To avoid any delay from the delivery standpoint, the information contained in the shipping order portion of bill of lading, is telephoned to a clerk at the receiving end of the wire, who types out the freight bill then and there.

Then we move on to the freight inquiry desk where the clerks are virtually surrounded by a battery of telephones ringing almost continuously. These boys are hard pressed at times endeavouring to answer the hundreds of daily requests for information concerning the freight arrivals. Next we glance over the shoulder of a *car record Clerk,* who is painstakingly entering car numbers in his big book numbered 00 to 99. The daily inward and outward movement of many cars is carefully recorded. It should be explained here that only the first two, three or four figures of a car number are inserted "depending on whether the car has two, three, four or five figures stencilled thereon. For ready reference if a record of car 426685 is required, one would turn to page 85 and the figures 4266 listed in a corresponding column.

As the scene shifts in the freight office, we find another group of employes attending to the public over the counter, making certain that owners, those who ship or received their own freight, in contrast to shipments delivered by the cartage services, are given prompt and courteous service. Another important adjunct to this thriving and throbbing work shop is a *diversion clerk* charged with the responsibility of carrying out the orders of our patrons when they desire a car or cars moved to another city or some remote section of the country.

The volume of correspondence which is part and parcel of a freight office, in addition to quoting freight rates on request and the tracing of lost or delayed freight, is adequately taken care of by a competent staff. Freight claims and the elimination of the main causes of breakage and damage to shipments in transit, are consistently being studied through a channel now

termed the *Freight Claims Prevention.*

The basic theme of all constructive effort in this line is "that an ounce of prevention is worth a pound of cure." The *claims staff* is constantly sifting and weighing the evidence surrounding a damaged package, endeavouring to piece it together mentally, and to ascertain how and why it happened and if, through improper packing or other causes, the shipper of the carrier is at fault.

Essential to any office, of course, are the industrious and painstaking stenographers, the small army of *junior clerks* performing their necessary if seemingly unimportant tasks, and the *outside messengers* who dash through the city streets in good weather and bad, delivering hundreds of freight bills and accounts to patrons in their appointed districts. They all deserve recognition.

The outward billing of freight is taken care of by another group of a separate office. As the bulk of outward shipments are not received at the sheds until after 5 p.m., you can understand that in order to have thousands of consignments properly waybilled, a constant burst of speed is maintained until well into the evening, to enable waybills to follow cars or be mailed to their proper destinations or *break-bulk* points. The *chief rate clerk* and his assistants, including a staff of *billers* and *road book clerks,* have to grapple with almost a full day's output within a space of a few hours.

Yardmen are familiar with tags like these, printed on tough buff cardboard to withstand the weather. Oversize shipment instructions are the most interesting to the layman

WHILE particular emphasis has been laid on the functions of a freight office, another integral part of the whole structure is the freight accounting office, where the entire accounting of freight and traffic matters must be handled expeditiously.

A freight shed and its many ramifications neve enter the mind of the average employe—let alone the layman—as being of very great importance to the workings of a railroad. And yet, freight carrying is admittedly the most important function of a railroad. No doubt most of you have seen freight being handled at some small station, possibly while on vacation or a visit in the country. You may have noticed the train crew unloading a shipment or two from a boxcar and thought no more about it. Probably it never occurred to you to wonder how many hands it passed through at transfer points, or the number of railroads it traveled over to reach its final destination.

Let's take a leisurely stroll through the sheds and see what happens to that shipment our patrons are anxiously awaiting. In the case of *forward freight* the cars may be placed during the night or early morning as they arrive from the main yards. This movement of cars is made on pre-arranged schedules and not in a haphazard fashion one might think. There may be several sheds numbered 1, 2, 3, and so on. At some freight terminals all cars arriving from the east are placed at the west shed and cars from the west placed at the east shed. The object of such designations is obvious. Cars of merchandise arriving in the main yards are labeled by the *yard staff* located in these marshaling yards. The *yard clerks* are familiar with the existing facilities at the freight sheds and are governed accordingly, directing cars arriving from the east to the west shed and vice versa, inasmuch it is safe to assume that they will continue in the same direction.

When the *freight checkers* and *handlers* go into action every morning the sheds re-

SOUTHERN PACIFIC COMPANY—PACIFIC LINES

TO ROSEVILLE SHOP 194

BAD ORDER

DEFECT

CAR INITIALS NO. LOADED OR EMPTY

PLACE CARDED ROSEVILLE INSPECTOR

TO STAFF—WHEN DERAILED, CORNERED, SIDE-SWIPED, TELESCOPED ABOVE, SILLS OR DAMAGED DUE TO ANY OTHER RULE 32 CONDITION.

This tag makes nobody happy. In the case of *foreign* road cars requiring more than one hundred dollars' worth of repairs, the owner must be contacted for instructions

semble a bee-hive of industry as the bulging contents are removed from the many cars for local delivery or to be stowed away in another car or cars for furtherance to other points. The freight may be transferred once or twice or oftener before finally reaching its destination, because as a rule each car assigned to a regular carding point contains freight for points beyond the one to which it has actually been labeled.

Let us return to the freight shed a moment and see what has been taking place since our thoughts wandered along other lines. The *shed checkers* have carefully checked out each shipment listed on the freight bill and *truckers* are now wheeling their way along the shed runway in the act of stowing the freight into its designated car.

And, in addition to the less-than-carload freight handled through the sheds, conveniently-located team tracks cater to the requirements of carload traffic. Various commodities including cheese, butter, eggs, fish, paper, machinery and a host of other high class shipments too numerous to mention, move in and out of a busy terminal every day. Special protection must be given to goods of a highly perishable nature. Such commodities travel in a refrigerator car and in summer, ice-filled bunkers adequately protect these goods. In winter charcoal heaters are placed in these self-same bunkers to ensure the safe arrival of shipments likely to be damaged by frost.

Another interesting feature about a freight terminal is the automobile unloading facilities. During the course of a year hundreds of automobile cars are unloaded. This service is oftentimes performed by the carrier to release much-needed equipment with the least possible delay, so that it may be speedily returned to the factory for another load. A casual passerby noticing four automobiles in one car, with two of them decked above the others on a tripod arrangement, would wonder how they would ever be unloaded. But a small staff of experts with years of experience behind them proceed to affix the wheels and cramp the autos out with as little apparent fuss and effort as one would require to light a cigaret.

In short, a freight terminal may not appeal to many as being a colorful spot. Nevertheless, if you look closely enough you will see pages of the romance of railroading written there every day. Just as a steam locomotive standing at a station is an object of power and wonderment, so the various duties performed in preparation for the work this iron monster has to do reflects a quality of drama all its own.

INFORMATION BOOTH

Each month the Lantern Department prints answers to rail questions of general interest, submitted by our readers. We do not send replies by mail.

1

HOW many locomotives did Class I United States railroads have on order at the beginning of 1948?

Class I carriers had 1226 locomotives on order, of which 30 were steam, four electric, and 1192 Diesel. This was the

Photo Courtesy the Nickel Plate Road

Berkshire at Conneaut, Ohio. The Nickel Plate's 767 is one of seventy S Class 2-8-4s now handling unprecedented peace time freight traffic in the five states served by the NYC&StL

greatest number since October, 1923, when 1242 units were on order. On January 1, 1947, 604 locomotives were requested, of which 64 were steam, six electric and 534 Diesel.

2

FURNISH data on the Chesapeake & Ohio's Trace Fork subdivision extension.

C&O is now building a 5.93-mile-long branch from a point near Holden, West Virginia to a new mine of the Island Creek Coal Company on Trace Fork of Pigeon Creek in Logan and Mingo Counties, West Virginia. Approval was given by the ICC on the express condition that construction commence on or before June 15th of this year, and be completed on or before the same date of next year. Chessie line officials estimate cost of the new line at about 1½ million dollars. Estimates state that the area contains deposits of approximately 50 million recoverable tons in the vicinity of the new extension.

3

WHICH Rock Island Rocket *passenger train brings in the most revenue?*

Of the fifteen Diesel-powered *Rocket* streamliners, operated over eight routes, the *Rocky Mountain Rocket,* running daily between Chicago and Denver-Colorado Springs, brought in the most money last year. This train earned a record of $3.39 for each mile operated over the 1075-mile distance between the terminals. Second in train mile earnings was the *Peoria Rocket* which makes two round trips daily (Peoria to Chicago) and earned $3.17 per mile operated. This was the first streamliner to be placed in service by the Rock Island and has been consistently popular since inauguration in September, 1937. Largest total revenue earner in the entire *Rocket* fleet was the famous *Twin Star,* placed in service between Minneapolis and Houston, via Kansas City, in January, 1945, showing a gross income during 1947 of $2,894,234, or a little over $2.90 per train mile. An entirely new *Rocket* service, the *Corn Belt,* was inaugurated between Chicago and Omaha, via the Tri-Cities and Des Moines, last November, and averaged $2.75 per train mile by the end of the year. This train provides an over-night run between Chicago and Omaha, and return, leaving Omaha at 11:30 a.m., arriving in Chicago at 8:30 p.m. Passenger *Rockets* amassed a total of 3,680,673 miles last year, and earned a gross revenue of $10,054,673.

4

PLEASE compare the Erie's new Alco road Diesels with the Electro-Motive road freight engines, and tell where this power is being employed.

At the end of last year six Erie Diesel road locomotives were delivered and six more received early this year. Nine Alco four-unit engines closely followed three 6000-horsepower, four-unit Electro-Motive Die-

With plenty of oil just across the Caspian, this Soviet Diesel operates between Ibilisi, in Joe's old home state, and Baku, on the Apsheron peninsula

Sovfoto

Erie Railroad Photograph

No need for smoke jacks in this roundhouse roof. Four of Erie's nine freight Diesels assigned to runs east of Hornell get a breather at the home terminal

sels, Numbers 706-708, which were immediately put into service hauling freight trains up to 110 loaded cars over the hilly grades of the Kent and Mahoning divisions. This power supplemented six similar four-unit road Diesels, each of 5400 horsepower, which have been operating since 1944 over the 209-mile run between Marion, Ohio, and Meadville, Pa.

The Alco-GE Diesels were placed in freight service in the territory between Hornell, N. Y., and Jersey City, a distance of 332 miles. The assignment of freight Diesel power is nine Alcos on the east end and nine Electro-Motives on the west end. When the three Electro-Motive engines were added to the west end operation, it was possible for the Erie to extend its Diesel freight operation an additional 107 miles from Meadville to Salamanca as a regular run based on the present volume of business.

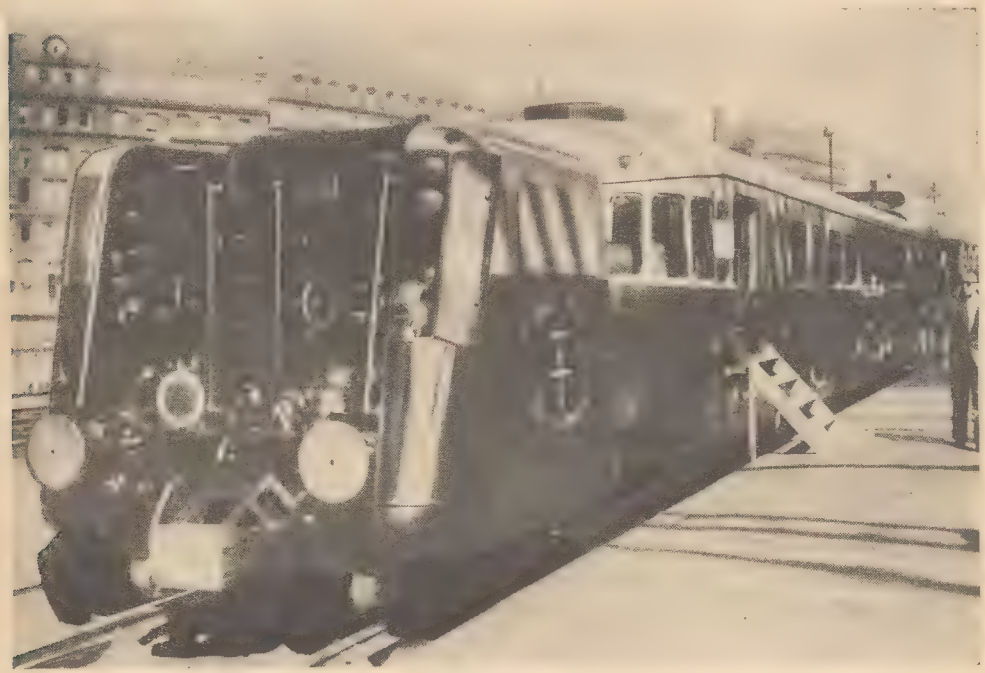
This run covers a stretch of 316 miles between Marion and Salamanca over which these engines are hauling through freight trains. At some future time, when traffic is lighter, it may be possible to run them right through from Marion to Jersey City, a distance of 729 miles, but for the present, due to the quicker turn around, it is more economical to run them east of Hornell and west of Salamanca, with steam operation over the Allegany division.

The passenger Diesels, of which there are seven three-unit 4500 horsepower Electro-Motive engines, placed in operation last August, start their runs at

Marion, go west to Chicago (except on Trains 7 and 8 which are Diesel-powered only to Huntington, Ind.), then operate east all the way to Jersey City and back again to Marion, a practically continuous run of 1995 miles before cutting off for maintenance. After routine servicing, the locomotive then drops back one train and makes another round trip run.

In addition to the road Diesels, the Erie received thirteen Diesel switchers last January, and will shortly add eleven more. When all of these are delivered, Erie's Diesel fleet will number 93 locomotives.

	ALCO 6000 HP	EMCO 6000 HP	EMCO 5400 HP
DIMENSIONS			
Overall length over couplers	203' 10"	201' 4"	193' 0"
Height over all, above rails	14' 10"	15' 0"	15' 0"
Wheel diameter	40"	40"	40"
Total wheel base	187' 0"	187' 0"	177' 0"
SUPPLIES			
Fuel oil (gallons)	4800	4800	4800
Sand (cubic feet)	88	64	76
Lubricating oil (gallons)	800	800	740
Engine cooling water (gallons)	1000	890	900
WEIGHTS			
Total weight, fully loaded (pounds)	942,000	923,400	925,300
Wt. of loco. with half of fuel and sand	921,000	903,400	904,700
Maximum tractive effort at 25% of adhesion	235,500	230,850	231,325



French engine manufactures her own fuel. Exhibited at Saint-Lazare station recently was this Renault railcar trailer which generates gas for a three-hundred horsepower traction engine

Press Ass'n Photo

Selectmen of Brownfield, Me., carry on business as usual from their temporary office in Maine Central combine 509, loaned to the community after last year's disastrous forest fires wiped out a large section of Brownfield, including the town hall

5

GIVE details of the Canadian Pacific's 31 million dollar equipment order.

This year's new equipment order includes 44 Diesel locomotives, 2100 freight and work cars and 115 passenger cars of various types. Deliveries of 32 million dollars worth of carry-over orders are expected to be completed by October of this year. They are for 58 steam locomotives, 2480 units of freight and work equipment and 59 passenger cars. In addition, the CP announced a change-over in air-conditioning of passenger cars by use of mechanical devices instead of ice. Freight cabooses will be made of steel for the first time.

The Canadian Pacific's Esquimalt Nanaimo Railway on Vancouver Island will have complete Diesel equipment. Thirteen of the new Diesels will go there, and the whole order will bring to 99 the number of1000-horsepower Diesel units in service. The new passenger equipment includes 15 coaches, five sleepers, 15 baggage-express and ten mail-express cars. Orders for work and freight cars provide for 1000 box cars; 100 covered hoppers; 350 triple hoper cars; 350 gondolas; 200 ballast cars and 100 steel cabooses. The backlog of undelivered equipment, which the company will have in operation before the year's end includes 35 coaches; five roomette-type cars; ten mail baggage; ten express-baggage; 980 box; 250 triple-hopper cars; 100 covered hoppers; 30 cabooses; 500 reefers; 120 automobile; and 500 gondola cars.

6

HOW does the ticket delivery service operate in New York City?

On March 1st, the New York Central, Pennsylvania, New Haven, and Lehigh Valley introduced a ticket delivery service, in cooperation with Western Union. This plan covers all types of tickets for services in which any of these roads participate. In addition to providing greater convenience for those who use it, the ticket-to-your-door method automatically reduces window waiting for those who still prefer to obtain their travel accommodations personally. The service will be offered at Grand Central Terminal by the New York Central and New Haven, and

There are smaller railroads than the Buffalo Creek & Gauley, extending between Widen and Dundon, W. Va., 18 miles, but we award this arch-windowed railcar first honors as the smallest full-fledged baggage coach on an American railroad. She was built by the Four Wheel Drive Auto Co., of Clintonville, Wisc.

Photo by R. W. Richardson, 477 E. Market St., Akron 4, Ohio

at Penn Station by the Pennsy, New Haven and Lehigh Valley, and by the four railroads at consolidated city ticket offices.

Under the plan, after travelers have made their Pullman reservations by phone in the usual way, they may obtain the necessary rail and Pullman tickets for their space merely by phoning the nearest of these offices. The railroad's ticket office will take the order for such tickets, will make out the rail and Pullman tickets, place them in a sealed envelope, and arrange for prompt Western Union delivery anywhere in Manhattan, the Bronx, Brooklyn, Queens or Staten Island. The purchaser will give the messenger cash for the tickets, plus a delivery fee of fifty cents or more, varying with the distance of the delivery. This fee covers the messenger's trips to the ticket office and to the purchaser's address. In cases where credit had been established with the ticket office in advance, the purchaser's check will be acceptable. Deliveries are made between 8:30 a.m. and 10:00 p.m., seven days a week from Grand Central and Penn Station.

7

OUTLINE the Chicago & North Western's 1948 maintenance and improvement program.

Included in this plan is the acquisition of 39 Diesel locomotives, in addition to those previously on order. Six of the new

Photo from Frederic Lewis

Baby Mallet on the Western Md. Business is looking up on this well-managed eastern carrier, which stands to benefit by increasing coal shipments to Baltimore steel mills resulting from slowdown in Great Lakes ore operations

Harris & Ewing Photo

Modern Mile Mule. This squat differential locomotive weighs 23 tons; hauls a hundred or more tons of Pennsylvania bituminous with ease

Diesels will be 2000-horsepower passenger; fifteen 1500-horsepower freight; and 18, switching locomotives. New freight cars will number 2350. Among major budgeted items is the construction of a Diesel locomotive service and repair shop at Proviso, Illinois, at a cost of $642,000; completion of construction of a $1,860,000 modern Diesel service and repair shop, and completion of a $1,940,000 CTC project between West Chicago and Nelson, Illinois. Other major projects include installation of more than 130 miles of 115-pound rail and 222 of out-of-face ballasting in high-speed territory, as well as a variety of improvements to roadway, structures and equipment. The North Western will also rebuild 500 hopper cars. Improvements during the C&NW's Centennial Year will top 123-million dollars.

8

WHEN were helical springs first used in passenger car trucks?

In the 1850s a crude example of the volute spring which takes the form of a wound flat spring with a slight spiral was used in place of a block of India rubber in some car truck pedestals. The true helical spring quickly succeeded it but did not come into general use until the '70s.

9

DURING the past few months I have noticed several Diesel locomotives being operated on the Soo Line. Kindly supply information regarding Diesel equipment owned.

The MSt.P&Sste.M now has a fleet of five Electro-Motive, and five Alco-GE Diesel freight road engines, and eight 1500-horsepower Baldwin-Westinghouse road switchers. The latter were delivered in February, 1937. The road locomotives, all of which are 300-horsepower engines, were placed in operation late last year, and during the first and second quarters of 1948.

10

COMPARE the 4-8-4's of Rock Island, Grand Trunk Western, Missouri Pacific, and Spokane, Portland & Seattle.

	RI	GTW	MP	SP&S
Number	5100-5109	6312-6336	2201-2215	700-702
Class	R-67	U-3b	26s, 63	E-1
Drivers	74	73	73	77
Cylinders	26x32	26x30	26x30	28x31
Pressure	270	250	285	260
Tractive Force	67,000	59,000	67,200	69,800
Weight on Drivers	280,000	245,000	280,000	295,000
Builder	Alco	Alco	Baldwin	Baldwin
Date	1944	1942	1944	1938

Locomotive of the Month:

Santa Fe's 3752

Meet Santa Fe Locomotive 3752, one of a group of fourteen 4-8-4's numbered 3751 through 3764, constructed by Baldwin in the years 1927, 1928, and 1929. All of these engines have been modernized and the 3752, as rebuilt at the Topeka Shops in 1948, is essentially a new motive power unit.

To increase the capacity of this engine, without raising the operating boiler pressure, the following outstanding features were incorporated in her design: 1, fabricated steel cylinders arranged for free steam flow; 2, rotary cam poppet valve gear; 3, a more effective smokebox arrangement; 4, circulator firebox with "Dutch Oven" bricking. Other improvements include lightweight pistons, piston rods and crossheads; open type feedwater heater, and chassis lubrication.

The welded cylinders were fabricated from rolled steel plates ranging from five-eighths to two and one-fourth inches in thickness. Incorporating a high sad-

Photos Courtesy Santa Fe Railroad

dle and inside steam pipes, they are probably the largest built-up cylinders in existence. A total of twelve eight-inch diameter valves are used, one admission and two exhaust at each steam port. These are opened by continuous cams and closed by steam load and spring action.

The poppet valve gear pictured at the right was supplied by the Franklin Railway Supply Company and is a departure from the more intricate method of steam distribution which they introduced some years ago. The present design derives its revolving motion for the cams at the main wheel, with the driving gear box floating on the return crank pin—a method of suspension which has been used abroad and was introduced to American practice on D&H Pacific Number 653 nearly two decades ago

Specifications

Cylinders	30x30
Drivers	80
Pressure	230
Grate Area	108
Weight, Engine	476,600
Tractive Effort	71,350
Weight, Tender	396,246
Capacity, Tender	
Oil	7000
Water	20,000

At left: Welder's masterpiece—built-up cylinders and saddle

Below: The 3752, before and after rebuilding. A dual-service machine, she generally operates from Argentine Yard (Kansas City) to Clovis, N. M., or handles such heavy passenger trains as the ***California Limited*** between Kansas City and La Junta, Colo. Forward motion cams, arranged for 90 percent starting cutoff, provide "Diesel engine starts"

The ABC System

By B. A. THOMAS

Smoking Over Was a Pleasure Compared to Playing the Puppet While Sleepy Ops Pulled the Strings

FORTY years ago none of us rails had ever heard of trying to run trains without train orders and timetables. We knew that the oldtimers told of making their own meets by "smoking over" to some other passing track in the days when trains were few and far between.

But about the year 1908, bulletins were posted at Livingston, Montana, a terminal on the Northern Pacific, declaring that the Interstate Commerce Commission had granted permission to adopt the ABC System on the east end of the Montana Division, between Livingston and Laurel. This stretch of track covered about one hundred miles, as well as I can remember it.

Published in the first annual report of the Block Signal and Train Control Board was the following: "A modification of the telegraph blocks system has lately been introduced on Northern Pacific Railway single track which merits attention. This is the simple telegraph block system, but each operation by the signalman—or rather the series of operations by which a signalman assures himself that a block section is unoccupied and then gives the proceed signal to a train—is carried out under the supervision of the train dispatcher, since all block signal stations of a district are on a single wire connected with the dispatcher's office. This setup is commonly called the ABC system.

"A train is admitted to a block section only on a signal in which the dispatcher and two block signalmen have cooperated, thus greatly reducing the chances of error and consequent danger.

"Operations are further safeguarded by requiring each train to stop at every station, unless the signalman both displays a clear signal and delivers written cards to the enginemen and the conductor. (By means of large hoops these cards are delivered to trains passing at twenty-five miles an hour and faster).

"By means of the steady, regular employment of these safeguards, provision against collisions of trains is so fully secured that the officers of the road have felt warranted in the discontinuance of the rule requiring all meeting orders to be written out, telegraphed, repeated, and receipted for. This writing and repeating process is so slow that it causes many delays to trains."

To install the ABC system, the company had to build several new passing tracks at strategic meeting places. Together with the other necessary devices to make this adventure a success, this added up to an enormous expenditure. Since the scheme only lasted a few months, it must be rated as a costly failure. Nevertheless, much was learned that could be put to good use in the future.

I was braking for Conductor Broy the night the ABC system went into effect. Leaving Livingston I rode the top of the train to the mile-board, then hurried to the caboose to see the orders. It'd been customary for the skipper to show the orders to the brakeman; yet when I asked to see the orders, he merely grinned, handing me a card.

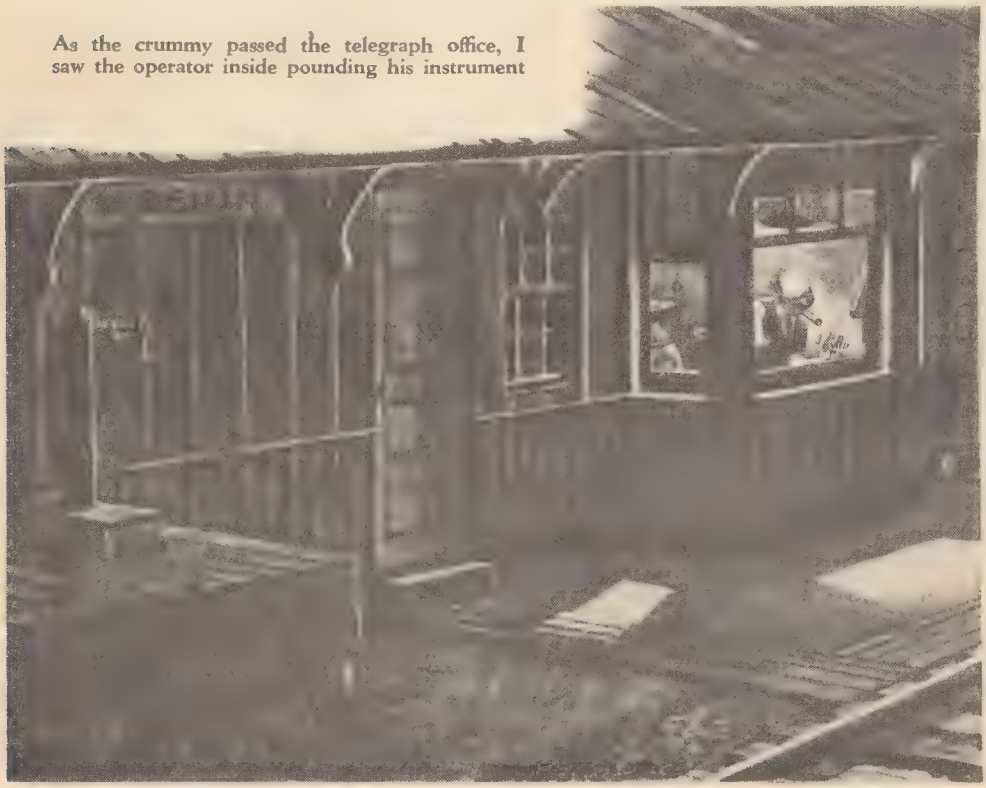
I looked it all over and read the following, "Engine Number will proceed to Mission and occupy the westbound passing track." Since Mission was the first station out of the terminal, we arrived there and went clear in a few minutes. The order board was against us, so Broy left the caboose and walked the 65-car lengths to the telegraph office for additional instructions.

Before he left, the conductor instructed me to stay at the rear end. "We may have to back out of here," he said. But in a short time I saw lights bobbing around the engine, and then we pulled out of the siding. As the crummy passed the telegraph office, I looked for the operator to hand up some dope. Instead, he was inside pounding his instrument.

After lining up the switch behind us, and getting the usual *toot-toot* from the engineer in answer to my highball, I climbed up in the cupola. Sitting there alone, I had a feeling that things were all wrong—the uneasiness I'd known the time I had run a meet. It was something I couldn't put a finger on, but over and over I kept asking myself, "Where're all these passenger trains and time freights?" I realized that they were on the rail somewhere, but without a timetable I had no way of telling where.

I climbed down out of the cupola and read the instructions again. When I read that about "a signalman assures himself that a block section is unoccupied and then gives the proceed signal to a train," I remembered the time in a Dakota blizzard when an operator thought the block was "unoccupied" and gave the proceed signal to a 90-car drag of wheat that plowed right through a local that was standing in front of his office.

I recalled still another time when we got the proceed signal at the west end of a mile tunnel, and we met a passenger



As the crummy passed the telegraph office, I saw the operator inside pounding his instrument

train in the east entrance of the same tunnel—single track and no skids. Reading on I discovered we were only puppets, while the dispatcher and his two stooge "operators" pulled all the strings for the show.

Experience had taught me that dispatchers were not infallible. They were human like the rest of us: that was the reason for the Soo Line wreck at Enderlin, North Dakota, and many others. Yes, sir. I remember that guy very well. He was the fellow who gave me no less than three lap orders on the Great Northern, and a mainline meet on the Chicago & Great Western. Not only that, I've dug the big hook out many times in various yards, where the dispatcher might have avoided the spill.

These were the thoughts that filtered through my mind the first trip I worked under the ABC system. Nothing of importance happened that night—nothing but delays, that is. Later, we were instructed to load nineteen cars of stock one day at a station called Springdale. The stock chute was located on an industry track that wouldn't hold this many cars. Every time we spotted a car for loading, we'd have to get permission from the dispatcher before we could stick our nose out on the main line. This only prolonged the agony.

To increase the delay, it was necessary to run down to the east end of the passing track to do our switching. Each movement on the main line had to be protected by a card issued by the dispatcher. Our good old flagging rules were not worth a thin dime. So after a few months of terrific train delays, accidents, and close-calls, the ABC system was dumped into the ash can.

None of us put on deep mourning for its departure. That ABC setup had been a pain in the neck, a headache for us all.

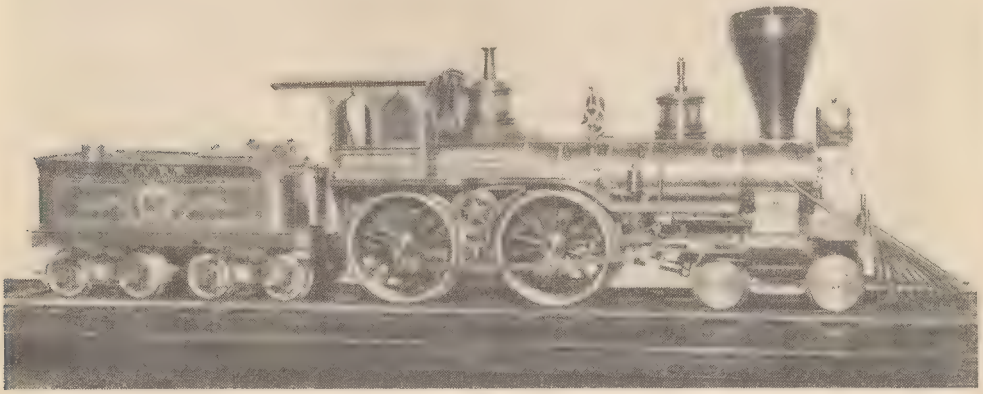
The Vermonter

MODEL BUILDER

GUY A. VAUGHAN was a lonely man to a good many people. He was born in Hartland, Vt., and he used to go back for a visit now and then—he looked lonely there, too. But a Vermonter could tell that he wasn't. He'd sit watching a domino game at the back of the general store, and never say a word. Or he'd take a walk just to get a glimpse of the tracks the old Woodstock operated over when he was a boy. If he said anything then it was a word or so about whittling the wheels of his first locomotive from his mother's wooden spools. There was a way he laughed that made you think he hadn't waited for the thread to be used; he'd just taken those spools from the work basket and hid down cellar until he had that first gravity railroad working. He'd tell you about it if you showed enough interest. And he had card-sized photos of the prize-winning models he'd built in later years. You could see those, too, if your interest was the right kind.

He was a seventy-niner, he said, meaning that was the year he was born; and it was significant to him that Daniel Willard, the great B&O president, was born a few years earlier, on a farm like himself and

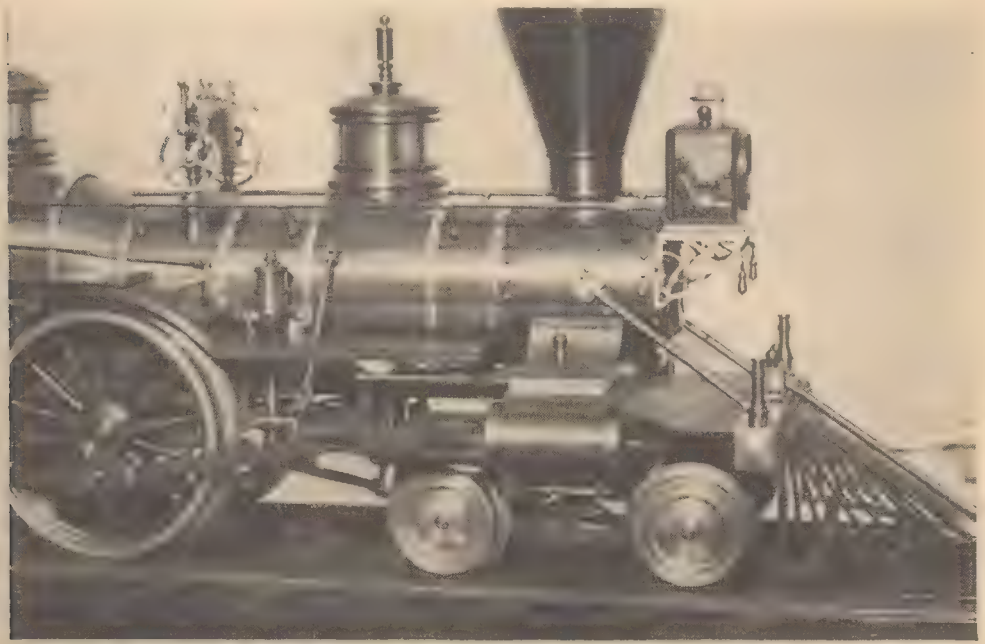
Masterpiece of brass, copper, steel and duraluim, assembled with machine screws and rivets. Over-all length is 18 inches. CVR roster does not give builder's name and construction date for *Gen. Smith* prototype. Rebuilt at St. Albans in 1866, the old 4-4-0 was sold to Stanford, Shefford & Chambley in 1884; not scrapped until 1895



near the same town, and that the two of them had learned their first railroading on the Central Vermont. Dan'l had gone from trackman to high official; but if there was any real difference to be envied in their fates, Guy thought, it was that Dan'l had actually seen the woodburner, *Gov. Smith,* when he was a boy—but then Guy had built her to scale, and that made things even for him. He didn't think much of the rest, advancement and money, or the years between.

He'd started with the wooden spools when he was eight. Five years later, he could open the cellar door and see iron wheels on iron cars. Nobody had taught him, he was born with the right sort of know-how and the right hands, and he was so sure of it that at seventeen, having no more first-hand knowledge of a turret machine than a picture in a magazine, he presented himself to the head machinist at Jones & Lampson in Lowell, Mass. (the family had moved to Tewksbury earlier), as an experienced turret man.

When he went up to Portland, Me., to work on the propellers for the boat Peary was taking on his Artic expedition, he seemed to be leaving the railroads behind. There was a reason for his choice; he wanted to be an engineer and no man with the marked astigmatism he had could dream of realizing such an ambition. It was better to get far away from the locomotives he couldn't run. Afterward, he saw that his decision hadn't counted—there was a Modeler shaping his life the way his hands had shaped cars and engines when he was a kid. He had married in Massachusetts, and in Portland he worked himself sick. The two things combined—he may have felt, conspired—to send him back to railroading and model-making. At any rate, once bad health had taken him to California, he couldn't fail to see that the biggest thing there was the Southern Pacific.



Natural metal finish highlights perfection of detail in this close-up of the *Gov. Smith.* Elaborate headlight bracket and wheel design of bell fixture in polished copper match the pointed arch of the stained glass cab windows. Boiler and attachments can be removed

Everything fitted in. The Panama Pacific Exposition was getting ready to create a large job for a man with good hands. He worked in the SP shops, first in San Francisco and later at San Jose, and by

Wood in the tender of *The General*, Western & Atlantic's Number 3, is realistic reminder of Andrews' raid. Model differs slightly from the Rogers original, is facsimile of rebuilt job of '70s

Daniel Abbott prototype was BL&N's second engine of this name; Vaughan's model, his first in adult years. BL&N's Number 13, the *Abbott* became N&L's Number 2, B&L's 72, B&M's 372; was sold in 1899 to Poulterer & Co.

Consolidation with Wootten firebox, one of Vaughan's two departures from 4-4-0 type. Prototype is unknown; model bears no resemblance, except the Wootten boiler, to P&R's early camelbacks, or to PRR's 1885 2-8-0's

Prize-winner at 7th Annual Exhibition, N.Y.S.M.E., this Number 2 gage big hook has electric-drive, hauls two flatcars, is equipped with truck wheels for demonstration.

1913 or '14 was building a model of track signals and trains for the road to display at the Exposition. The planning and tinkering made him remember the old Woodstock and his cellar railroad. He told Mrs. Vaughan, "I'd like to build one of those little locomotives for myself," just mentioning it, not urging it at all, because money was scarce and he never expected it to be any other way. Mrs. Vaughan thought money oughtn't to be allowed to stop a man from doing for himself what he enjoyed so much, and she said so. She said, too, that he could take his time, he could spend a year or many years of evenings to build one locomotive.

The first one was the *Daniel Abbott*, a typical eight-wheeler of the type that in 1876 hauled the Jarret and Palmer theatrical troop special from New York to San Francisco in 81½ hours. Mrs. Vaughan doesn't remember whether the *Daniel Abbott* was finished in California or not—they returned to the East in 1916—but although it was beautiful in every detail, a perfectionist like Mr. Vaughan could never be completely satisfied. He worked in brass and steel, without castings, and with two ideas in mind: to make a model true to type and one that would run. The *Abbott* would run all right—by power of an 0-gage toy engine fitted into the firebox and geared to the rear driving axle. This was a method he never deserted, and in its running aspect the *Abbott* satisfied Guy Vaughan; but later models reflect his ever greater adherence to prototype design.

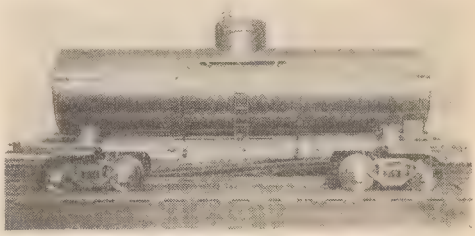
IT'S hard now to determine the order of construction for seven locomotives modeled over a period of more than thirty years. Many of the evenings, too, were given up to car building. The Vaughans had built a gray, frame house near New York City and Guy was at work for the Navy Department as early as the summer of 1918. The Navy, like the Southern Pacific, recognized his genius; letter after letter in Mrs. Vaughan's files commends him. But gun mounts were for the days, trains occupied his evenings.

On winter nights, after the supper dishes were cleared away, he brought his home-made lathe in from the workshop in the back yard and set the bench up on the kitchen table. There, while Mrs. Vaughan sewed or read aloud, his precise fingers manipulated drill and lathe, shaping the shining steel and brass into the forms of infinitesmal trucks. He had no milling machine and used a file to fit parts. For him there was nothing onerous in the slow, exacting work. He assembled the bodies with screws and bolts, channeling the siderods out of steel and building up the drivers on jigs.

Gradually, the rolling stock for his private Woodstock grew into a real roster. Upstairs under the attic eaves he set up a railroad and named the stations along 240 feet of tinplate track mounted on wooden boards. He could operate the movements of every train from levers controlling fifteen switches. The rolling stock tracked perfectly on the curves due to a special method used for pivoting the trucks, and automatic couplers of his own design made the switching moves as realistic as possible. He was always striving for realism—he used a center third rail and hid the collector shoes between the tender's truck wheels, so that nothing electrical could show on his locomotives—always asking Mrs. Vaughan if that didn't seem like a "real engine," or a "real switching move." It was to give this effect of complete naturalness that he set up a system for operating the entire railroad from one chair—like a dispatcher on a CTC system.

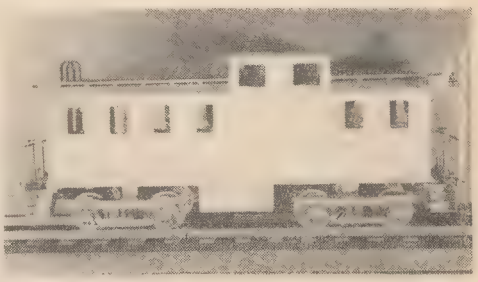
It was Mrs. Vaughan who treated the Woodstock to some right-of-way scenery in the form of trees, houses and animal figures from a Christmas *creche*. She recalls that the same shopping trip which brought a landscape to the miniature Woodstock was also the means of first bringing the models to the attention of other builders. While looking at some Lionel models in a department store, Mrs. Vaughan remarked to the manager, "What wonderful toys children have these days!" The manager looked surprised.

Mogul with Baldwin stack copies an 1880, or earlier, original; possibly a Boston & Maine. Pony truck is mounted on four roller bearings, swings on curves. Over-all length is 22 inches

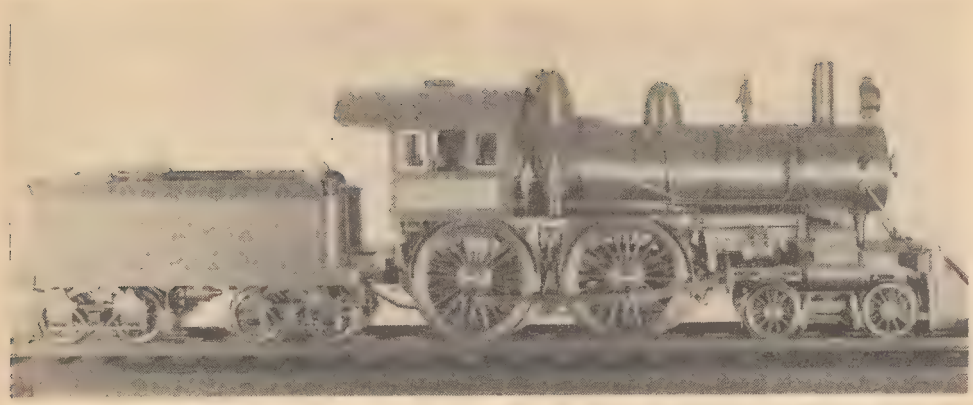


Tanker on the model Woodstock. Representative freight equipment includes five flats; box, stock, coal and oil cars; snowplow, reefers, crane; and cattle car and caboose pictured below. Automatic couplers are of Vaughan's own design

Brass cattle car with sliding door. Small hex-head machine screws used for assembling stud the braces, giving the car a jewel-like appearance. Weight, including detachable four-wheel trucks, is four pounds, two ounces



Aluminum caboose with steel bottom, brass wheels. Frames of real glass windows are copper. Similar fittings were used on an earlier-built wooden caboose and on two wooden reefers



Version in number 2 gage of the best the '90s had to offer, NYC&H's *999*, built at the railroad's West Albany shops in 1893. The model, completed fifty years after its prototype established its debateable speed record of 112.5 mph, pulls two open vestibule cars in commemoration of the *Empire State Express*

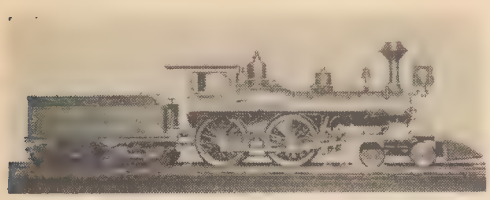
"More grown-ups than children get these," he said and went on to explain how the model-building interests of adult railfans had led to the formation of modelers' clubs.

Up to this time, Guy Vaughan had hidden his hobby with a reserve unusual even for a Vermonter. He was, Mrs. Vaughan says, sure that people would think his interest "childish."

He had always concealed his Woodstock Railroad like a shameful secret; and when Mrs Vaughan told him what the manager had said, he was at first incredulous and then shyly hopeful that maybe it was true—other fellows built models and met together to talk about their hobby and show their work.

It was in the same year that Mrs. Vaughan's conversation with the department store manager brought results from another direction. The New York Society of Model Engineers invited Vaughan to show his models at their annual exhibitions.

Even then it was hard to make up his mind to reveal his work so publicly. Since 1927 he had been at the Guggenheim School for Aeronautics at New York University, engaged in building aeroplane models for wind tunnel tests. His work there and his new title of Professor gave him confidence. Finally, in early 1935, he acted on the continued invitations of the model society, entering a typical Mogul of the late 1870's in the Seventh Annual Exhibition. On February 3rd, he won the first award for three-eighths-inch scale, steam outline, electric drive locomotives.



Weight: 9½ pounds over-all. ***Commodore Vanderbilt*** received first prize at N.Y.S.M.E. exhibition in 1940. Vaughan was 22 months building her; hired Paul Carlton to do the lighting and headlight painting, let unpainted metals create effective contrasts

THE shy Vermonter somehow seemed younger now that his handicraft was vindicated to him by the judgment of friends. He smiled more often and talked more freely, even to Mrs. Vaughan, of his plans as he sat over his workbench. He poured over pictures and studied specifications, pointing out the beauty of this or that engine design, and eagerly questioned his wife: "Do you like the lines here or not?"

It became a standing joke between them that he would build no model of a

type that was unpleasing to her. They both loved the 4-4-0s of the 60's and early 70's; and except for the prize-winning Mogul and a camelback Consolidation, the seven engines are all American types. "These are the kind children love," he used to say. "They like the painted tenders and ornamented bells and headlight standards."

He was a 32nd degree Mason and a Shriner, and he had in mind the children of the Shrine Hospitals.

His wish to leave his models to the Shrine Hospitals dated, Mrs. Vaughan believes, from 1935 or '36. They used to talk of it often; though gradually as time went on and the leg injury received during his service with the Navy Department grew more crippling, his plans for the final disposition of his models necessarily changed.

The Guggenheim School was closed down in 1937 and Guy Vaughan went as model builder to the studios of a New York architect. He was then fifty-six years old, a comparatively young man, but the question of security for Mrs. Vaughan had begun to weigh on his mind.

The models now appeared to him in the light of an investment for her future; and frequently he would discuss the money value of each engine. It was during his illness in 1944 that he laboriously copied out the prices on white tags and attached them to each piece of rolling stock. The tags are still there: little pieces of white cardboard—$2000 for this engine, $300 for that car—on which a man totaled the cost of a lifetime's work in shaky figures that, to us now, speak out loud his worry and fear for another's sake.

"He seemed easier after that," Mrs. Vaughan says, "but he often fingered the tags, and I could tell that he still thought of his earlier wishes. I wanted so much to reassure him, and would tell him how some museum might buy the models and save them for the children; or I'd say that maybe we could have an exhibition and get enough money to keep me and then we could donate the models to a museum. He liked to think of that, of a museum getting them, or some person who would treasure them as he did. They were like jewels to him."

Up to now, Mrs. Vaughan has made no effort to dispose of the models. The entire equipment of her husband's Woodstock Railroad—his memorial to a boyish love—has remained in storage since his death on September 26, 1946. It is impossible for her to make the gift she and her husband dreamed of. Except for this, lack of money would be less hardship than it is.

"I still hope," she says, "that a way will be found. Maybe some day—soon—the right person will come along. Someone who will cherish my husband's work as he knew it ought to be cherished." Until then, these exquisite miniatures will have to remain unseen by thousands of rail and history-minded citizens for whom Guy Vaughan lovingly created a legacy.

The General **comes at you head-on. . . Consist? A Civil War baggage car and two mahogany passenger coaches of the same period. Car weight is two pounds, complete with opening doors, sliding windows, and . . . Watch yo' haid, Suh!**

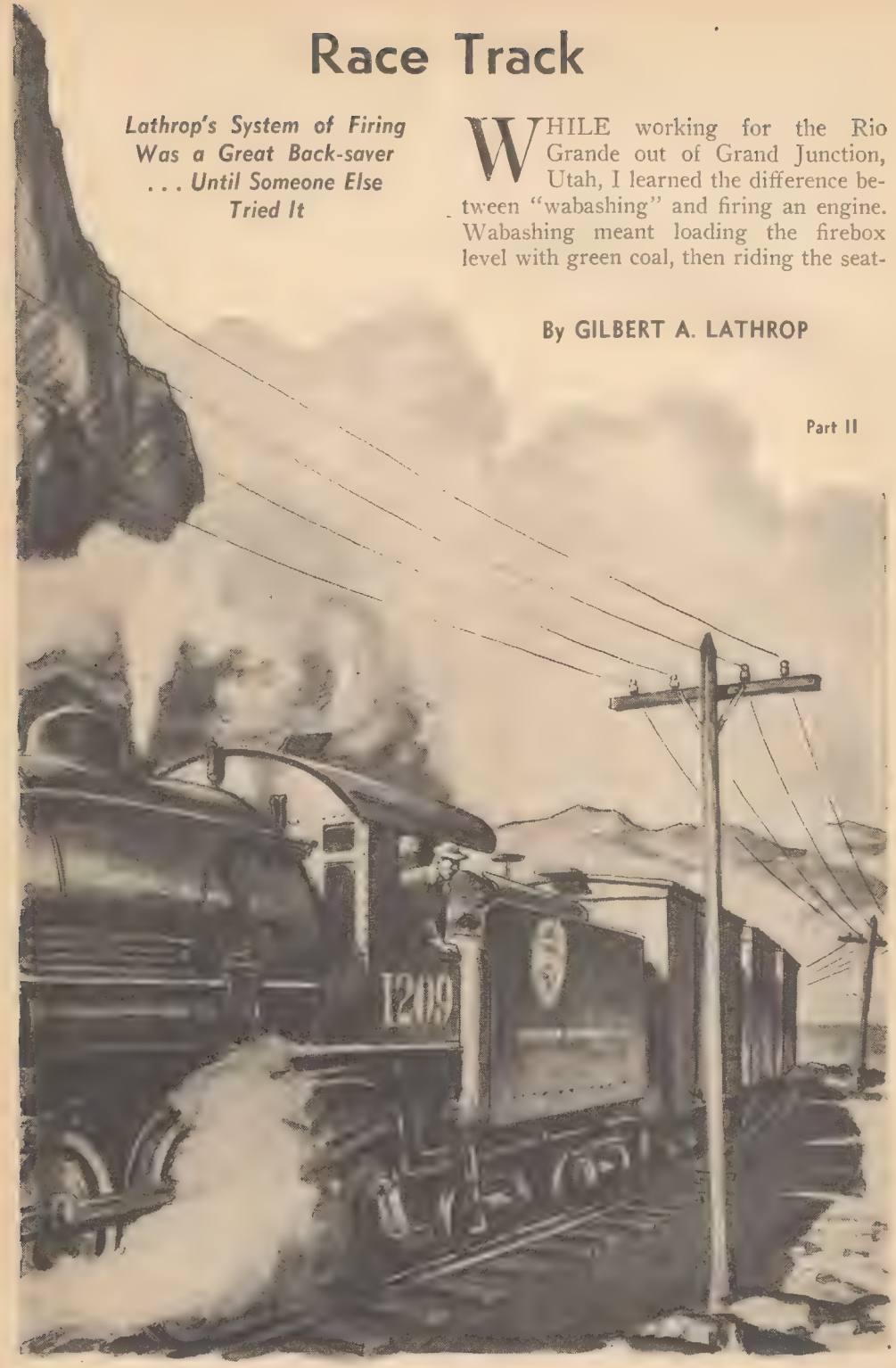
Race Track

Lathrop's System of Firing Was a Great Back-saver . . . Until Someone Else Tried It

WHILE working for the Rio Grande out of Grand Junction, Utah, I learned the difference between "wabashing" and firing an engine. Wabashing meant loading the firebox level with green coal, then riding the seat-

By GILBERT A. LATHROP

Part II



box while the stack cleared. It was effective, except that a tallowpot lost from ten to fifteen pounds of steam while he was baling in coal. And when it finally burned down to a white, bright fire, his engine usually opened up her release valves with a roar.

Several years earlier I'd signed up for a correspondence course on coal combustion and locomotive firing. One of the rules was, "a light fire, a level fire, a bright fire with a minimum amount of smoke." I remembered that rule; wabashing violated every condition it stipulated. So I began experimenting.

From about seven scoops of coal to a fire, I cut down to five. None of our engines had the air doors. They had to be opened and closed with a chain between each scoop, which added to the work. With one of those big babies yapping to her fireman, "I'll take this one and you get another," there was no resting between fires.

Owing to Charley Kriegbaum's rigorous throttle and reverse lever methods, I couldn't cut my scoops below five. But before long I was bumped, and caught a turn with an engineer named Dave LaMunyon. Dave was one sweet throttle-jerker. He was so good that he was finally promoted to traveling engineer, which job he was still holding the last I heard of him in the late 1930s.

Firing a locomotive for Dave LaMunyon was a real pleasure. It was so easy that before many trips were over I was keeping those big 1200s stinking hot on three scoops to a fire! I'd started the first day, after we'd pulled out of Green River tied to the head end of a solid train of oranges. My fire was well built up and level; the engine that trip was 1209, a free steamer with perfect drafting. I'd scatter one scoop of coal along the right-side sheet, a second along the left side and then slap the third against the fire ring so it would fan out over the center and under the door.

With each scoop, only a little blue puff of smoke would appear. The three scoops would lower the steam pressure only about three pounds. Then just as she needed three more, the needle would quiver against maximum pressure, which was one hundred and sixty pounds. I might say here that those 1200s originally carried two hundred pounds, but they were so slippery on the rails they soon had to

be cut back to one hundred and sixty.

I was getting a great kick out of my new method, paying no attention to Dave. However, he was watching me, but good; he had been for several miles. The main line climbed on a stiff grade twenty-nine miles from Green River to Thompson's, then dropped down to Cisco, Utah. So Dave was really pounding the 1209 on the back, what with a tight time order to fulfill.

All of a sudden the engineer jumped off his seat, into the deck. "What in hell kind of a job of firin' are you doin', kid?" he demanded. "You're liable to lose your fire, ain't ya?"

I grinned up at him. "Naw," I told him. "Everything's okay. Two gages of water, full steam pressure an' a light fire." I slipped her three shovels more while he watched.

"Well, I'll be damned!" he ejaculated. "Let me take your scoop. I want to see if I can do it."

I relinquished my scoop gladly. Dave tried to place the coal the way I'd been doing. In less than half a mile, the 1209 was lagging so I had to cut down on my injector.

"Hell!" snapped Dave, handing back my Number 5. "I've messed up your fire. See if you can build it up again."

It took me a couple of miles, but I finally got the steam and water where they belonged. Then I resumed my three scoop stunt. Of course, that performance got around by the grape vine, and it didn't set any too well with the rest of the tallows. Most of them knew I'd come from the narrow gage. On the standard gage, I became known as "that punk kid off the feeble-minded division."

Still I didn't give a damn. I was making "putty" for all the hoggers, and my record was going where it did most good—among the brass collars.

SHORTLY after Dave LaMunyon and I teamed up, a stunt occurred which had quite an interesting aftermath. It started the morning we were streaking down Ruby Canyon on Number 61, redball freight. We all knew a work train was doing a little ditching somewhere in Ruby Canyon, but this outfit had positive orders to be in the clear for all trains. So none of us were worrying about it.

The grade was just light enough so Dave had the Mike hooked up and the throttle just cracked. I was enjoying riding my seatbox between fires. Ruby Canyon was crookeder those days than it is now. We whipped around an easy curve. *Wham! Wham!* Two torpedoes exploded under our drivers. Dave answered them with a couple of raps on his whistle and pinched down our speed.

Ahead was another right-hand curve, the view beyond cut off by a towering red sandstone cliff. On my side lay a triangular flat between the main stem and the edge of the Colorado River. Near the center of the flat was one of those cellars dug into the ground and mounded over with a heavy dirt roof. Leading to the cellar was a cool, shaded entrance.

It was a sultry, hot morning. The brass sun made heat waves dance along the rails. Why I was looking at this cellar, even after we'd whizzed past it, I'll never know. But looking at it I was, and as the Mike and a dozen cars passed the shadowed entrance, a stocky, overalled man leaped out waving a red flag frantically.

"Plug 'em!' I yelled. "Red flag."

That's just what Dave did! With an emergency application dragging at the wheels, we slowed. And as we stopped, two caboose markers were staring at us like accusing eyes—less than a hundred feet away.

The fellow I'd seen come from the cellar entrance panted up beside the engine and climbed into the gangway. He was a heavy-set, sandy complexioned guy. Besides his brakeman's badge, he wore a mighty worried look. Turning to me, he gave a sheepish grin.

"Cripes, kid," he said. "I'm glad you saw me. Guess I fell asleep in that cellar."

I shrugged it off. "Well, we got stopped okay. I ain't sayin' a word."

Dave studied him a few moments. "Mighty damned poor job flaggin'," he

grunted. "But I guess we'll forget it."

This brakeman was effusive in his thanks. I'm going to call him Sandy Boomer because of following events, for he's probably gone to his reward long since. But if he hasn't, he won't be embarrassed by this true opus. Around this time, that work train had got-to-hell to clear and we resumed out interrupted voyage.

A few trips later Dave and I were called to deadhead from Green River to Grand Junction on a hotshot fruiter. These redballs carried a three hour and five minute schedule over that 106-mile district. This meant the hogger rode with his watch in one hand, his throttle in the other. It meant a fireman spaded about eighteen tons of coal during that short period of time. But today, Dave and I would wallow in luxury back in the crummy.

When we boarded the caboose, we found the traveling fireman was riding our train. He was an energetic, newly-promoted official, but a good Joe; and we all got to visiting. During our chin fest Dave mentioned the fact I was keeping those big Mikes stinking hot with a tonnage train on three scoops of coal to a fire.

"Listen, Dave," said the easy-going fireman, "I've baled coal into these Mikes, too. Don't try to kid me that way."

"I'm not kidding." He turned to me. "Want to give a demonstration, kid?"

I shrugged. "It's okay by me."

"Well, come on," said Dave, getting to his feet and heading for the front door.

The official and I followed. Since we had a solid train of reefers and the track was in fine shape, we had no difficulty in ambling over the tops. It was nice walking, in a cooling breeze fanned up by our motion. And it was something to make a fellow kinda thrust out his chest, seeing that fluted column of blue-black smoke cannoning into the sky as our Mike battled savagely against her heavy train.

We finally reached the head end, clambered into the tender, and slid down the coal pile on into the cab. The fireboy was a Wabasher, using a Number Seven scoop. But he had the needle laying right against the peg on the steam gage.

I'D BROUGHT along my Number 5, because we packed them with us like we did our watches. Dave explained that I was going to give a demonstration on firing, and the Wabasher gladly relinquished his place to me. I opened the fire door and turned my scoop upside down, so I could see whether there were any "humps or hollows."

The fire was quite level and not at all dirty, so I started from there. Since I was feeling pretty cocky, I really gave them a performance during the next six miles.

After that the traveling fireman suddenly got the idea he'd like to try it.

"Let me take that scoop," he smiled. "I want to try your stunt."

As I'd done before, when Dave had demanded the same thing, I handed him my shovel; and as Dave had done before him, we'd gone but half a mile when the official lost his fire, water and steam.

That was the only bad thing about a demonstration: it worked the tail bone off a fellow building up a new fire. But the stunt had some repercussions. I guess the traveling fireman must have passed word along about my unique system, because a few trips later I was called to fire a 29-car train of livestock from Green River to Grand Junction. There was nothing strange about that, except we'd have for our power one of the 700s, instead of a Mike.

These 700s were a high-wheeled, wagon-topped-boiler superheaters with Walschaert valve gear. Originally built for passenger service, they were fast but none too stout. Where the tonnage rating for a 1200 was 1800 tons, these 700s were only rated at 900 tons or passenger tonnage. Since we'd be dragging around 1200 that day, this stock train was drawing quite a bit of interest. In fact, Division Superintendent Teneyck was going to ride the engine.

Now I'd fired Number 775 a couple of trips before on the local with a hogger named P. C. Jones, a real high-wheeler. I'd kept her hot all the way, so I was none too worried about the stock extra assignment. I didn't give much thought to the

fact we were run around a couple of other engine crews; but I might have known others would be eyeing us.

I had the fire built up on my engine, the 789, and the deck squirt-hosed out before Dave arrived. Among us fellows on the RGW, these 700s were known as "ping-pongs," owing to their sharp, explosive exhausts. And each exhaust literally turned the fire almost upside down. All a fellow had to do was place a scoop of coal on the fire ring and the draft would take every speck of it off. The fireboxes were about three feet wide and seven or eight feet long, sloping all the way down to the flue sheet. It was only necessary to fire under the door and the back corners.

We were coupled onto our train before Teneyck climbed aboard. Now I'd met the super several years before under rather embarrassing circumstances, so I knew him, although he didn't recognize me. I was glad of that. He nodded curtly to the crew and climbed up on my seatbox. Then he addressed Dave.

"You've got over-tonnage," he announced, "but I've had the chief dispatcher give you right over all trains. And I've arranged a tight schedule for you. This livestock is getting on short time on their thirty-six hours, so do the best you can."

Dave nodded his head. The skipper climbed up with our running orders and our time schedule. Dave whistled off.

Going east from Green River, the track is slightly down grade all the way across the long steel trestle which spans the river of the same name. This gives the engine crews a chance to get a roll on 'em for the long grind up to Thompson's. We hit the bridge with the 789 really barking her stack off. I'd been about one fire behind Dave to there, and the super had been worriedly watching the steam gage. Now I gave that coal-hungry old gal another slug where it would do most good. The way the fire burned, I knew I had her on my side of the fence.

About that time the super tapped my shoulder. "You're not going to lose her, are you?" he asked anxiously.

I grinned. The sun was on our right side, so a nice dark shadow of the engine was cast on the left. "See that shadow?"

He looked and nodded.

"As long as you see a squirrel tail of steam included in that shadow," I informed him, "you won't need to worry."

Sure enough there was a nice squirrel tail imaged above the pops. He relaxed. I put on my gun and bowed my back. From there to Thompson's, there was no friendship between Dave and myself. I made putty, he used it. When he shut off for the order board at Thompson's, our pops opened with a pleasing wallop. We were right on our schedule.

BEFORE dropping down into Ruby Canyon, the track climbed a steep little hill known as Cottonwood. Dave was clipping off knots, when we hit the bottom; but the grade dragged us quickly down. We were slowed to a walk when Number 789 lost her footing. For a second everybody in the cab held his breath. Then Dave caught her on two streams of sand, and she staggered over the top.

On the descent to Westwater, I was able to relax and get a breath of cool air, so I stood up behind Mr. Teneyck. I was feeling pretty cocky by that time. He said something to me and I replied. Then I asked him,

"Remember when you were superintendent on the Third Division narrow gage back in 1911?"

"Yes, I do," he said, eyeing me sharply.

"Well," I continued, "do you remember one summer day when you and Mr. Malloney, the roadmaster, were riding your private car up Cerro Hill behind the morning freight train, and you waved to a sectionhand who packed a spike maul, a red flag and a track wrench?"

"Seems I do recollect something about that. Why?" asked the official.

"Well after you got around the next curve, you and Malloney walked back and caught that same sectionhand sleeping and fired him. Remember that?"

"I remember," said the super, beginning to smile.

"I was that sectionhand," I confessed.

Teneyck laughed. "You've improved plenty since then," he commented. "Just what's your name?"

Before we'd gone half a mile, the traveling fireman had lost his fire, his water and his steam

I told him and he wrote it down in a notebook. That didn't worry me any, though, because the past was past and I'd just done a good job of railroading. We went into Grand Junction that day with our stock train right on schedule.

A couple of trips later we pulled into Green River on a redball. We'd made the run in less than five hours. I might say here that in 1917 a fireman hand-fired those battleships the one hundred and six miles for slightly over three dollars. I think it was three dollars and six cents, to be exact.

I was rooming with a young fireman,

and when I got where we stayed, I discovered he'd shipped in a five-gallon keg of white corn whisky from North Carolina. Together with half a dozen other tallowpots and hoggers, he was sampling the contents. Of course I joined the merry throng and that stuff was dynamite. I'd had a couple of snorts by the time it was dark, and was feeling pretty good. Just about then there came an officious knock on my door. It was the caller.

"Lathrop," he panted, "you're called to fire Number 2, engine 782 from here to Grand Junction."

"But I ain't first out," I argued.

"Can't help that," said the boy. "We got a message to run you around the bunch. Number 2 will be about forty minutes late, so be there to take her."

"What's the idea callin' a fireman for Number 2 from here? The passenger division is from Helper to Grand Junction," I expostulated.

"Well, Number 2 sideswiped a caboose at Mounds. The hogger, Bill Sullivan, stayed with the engine, but the fireman jumped and landed in a pile of ties. They was makin' about forty."

"Did it kill the fireman?" I asked.

"Nope, just staved him up some. So you're to fill the emergency from here." The caller started to leave.

Every fireman who stood on the board ahead of me began to yell bloody murder.

"I'll turn in a runaround," they threatened.

The caller shrugged. "Turn an' be damned. The message to use Lathrop is under the super's signature."

I got into my fighting clothes with some trepidation. I was about half high and nearly seeing double, but I reckoned a few minutes in the heat of the firedoor would sweat it out of me. When Number 2 halted at the depot, I was ready to climb on. I had my scoop shovel in hand.

The traveling fireman had taken over after they had the sideswipe. About all that had happened was a crummy hadn't quite got in to clear. Number 782 had scraped it enough to leave long scratches all the way along its right side. Bill had got his foot caught in the quadrant and before he could unload they had whizzed past. The fireman had made the jump, unfortunately.

I CRAWLED into the deck. A scowling faced, keen-eyed bruiser of a man was wiping off the snout of his long oiler. He looked me over and wasn't impressed.

"This engine carries 200 pounds of steam," he barked. "We're forty minutes late and I aim to make up most of it from here to Grand Junction. If ya don't keep her hot, I'll make a whistlin' post of ya!"

"I'll do my best," I assured him. "What's your name so I can keep my time straight?"

"Sullivan! 'Sky Rocket Bill' Sullivan," he growled. "An' I try to live up to my name! If ya get reachin' for coal," he went on, "ya'll find a big buck sleepin' off a gin drunk wrapped around th' manhole cover. He'll pass coal fer ya."

Since it was customary to let a hobo earn his ride by passing coal for the tallowpot, this wasn't unusual. All the enginemen did it in those days. I decided I'd use the "buck" as soon as possible.

Boot! Boot! Sounded the chime whistle. Nine gaily-lighted coaches and Pullmans eased into motion behind the 782. One young fireman took up his scoop and with two firedoors before him—where only one should be—bowed his back.

Before we'd crossed Green River only one door of the two remained and I was sober as two judges. I've spaded plenty of tons of coal into locomotive fireboxes in my time, but that trip will always stand out as the hardest. We were rolling through Thompson's almost before I got my second wind. From there to Cisco, twenty-four miles, that big hogger threw away the bridle, kicked the old girl in the ribs and let 'er roll.

I reckon a clock would have shown our speed between Thompson's and Cisco at close to eighty-five that night. By the time we hit Cottonwood Hill, I was having to take a couple of steps back into the coal pit after each scoop, which didn't lighten my burden any. I wasn't forget-

ting the "big buck" who slept around the manhole; but Sky Rocket Bill gave me no chance to go back and roust him.

At Westwater—the bottom of Cottonwood Hill and west end of Ruby Canyon—I knew we'd stop for water. This would enable me to put my coal passer to work. When I scrambled over the coal pile to the back of the tender, sure enough an aroma of stale gin assailed my nostrils. My oil lantern showed me a large, shapeless hulk curled around the manhole. I prodded him with my toe and he sat up, looking around wildly.

"This is where you earn your ride," I yelled to him, as I jerked down the water spout. "I want you to pass coal."

"Yas suh, yas suh, Boss. I sho' will." He staggered to his feet and I handed him a worn scoop; then I opened the tank valve. The fellow began listlessly scratching at the coal pile.

Sky Rocket Bill blasted off the moment I swung the spout into the air. By the time I hit the deck we were waltzing up the water grade of Ruby Canyon. Along this section, the engineer always poured it to 'em, but I wasn't worrying. Didn't I have a husky coal passer?

We hadn't gone a mile before I noticed I was once more having to walk back for each scoop of coal. I straightened my cramped, aching back and looked at the coal pile. No passer was in evidence.

"That blankety, blank, lousy—" I gritted my teeth.

Still there was no chance to leave my fire long enough to rout him out again. I sweated it out to the top of the hump west of Uintah. The moment Sky Rocket slammed his throttle shut to drop the two miles into Uintah, however, I was over the coal pile, armed with my coal pick. The buck was curled up, soundly sleeping again. I prodded him hard in the ribs.

"Listen, you," I yelled, mad as a hornet, as he awoke. "Get down in that pit and shove coal ahead for me. If ya don't, I'll konk ya over the head with this coal pick and dump ya overboard!"

He saw that I meant business. From Uintah on to Grand Junction I didn't want for coal.

I KNEW we'd made up twenty minutes over the one hundred and six miles, so I was feeling pretty good. I also knew that an extra man catching a passenger turn held that turn for ten days, or until the regular fireman reported back for work. But first I had to get Sky Rocket Bill to okay me for passenger firing, which shouldn't have been any trouble, after the showing I'd made that night. So while we were drifting the last mile into Grand Junction, I crossed the deck.

"Mr. Sullivan," I shouted, "how about okaying me for passenger firing?"

He half-raised from his seat. "Okay *you?"* he bellowed, "when I been fightin' for steam an' water all night! I should say I won't!"

Sky Rocket almost got slapped with my scoop, only I fought back my anger. "Then how'd you like to go plumb straight to hell?" I yelled, returning to my side.

I didn't speak to him again. We put our engine over the cinder pit and went into the locker room together. I registered him in, because such was customary. Then I started home.

Sky Rocket was right behind me, not saying a word. We'd gone half a block, when the old codger suddenly stopped. "I forgot somethin'," he grumbled. "Wait here for me." He hightailed back to the locker room.

I was tempted to go on, but I didn't. In a short time he returned. He glared at me from under his brushy brows.

"Know what I just did?" he growled.

"Nope," I said, and almost added, "and don't give a damn, either."

"Well," he told me ominously, "I okayed you for this turn with me. But I don't stand for no foolishness. If ya don't cut the buck, I'll turn you in. You'll come out with me tomorrow afternoon."

I held the turn three roundtrips. By that time the regular fireman was able to return to his job. So back I went on the freight board.

(To be continued)

Leading the Hotshot

A new "Met" star takes to the boards. Translated, that's an all-electric elevated train on a maiden run over the old M-WS, later CRT, now Metropolitan Division of Chicago Transit Authority

AL ERNST impatiently booms the track brakes of the new silver and red, articulated-type Chicago subway-elevated train. From its cab, he glares at the opposing signal board to eastbound Bellewood.

"Darn that towerman! Is he holding us here just to look us over?" Al heaves a resigned sigh and pushes his cap back. Again his eyes check the signal-lights to see that he has not forgotten his recent breaking-in. Door lights gleam amber; red automotive-brake warning-light is off; white generator signal-light is out. The "all-electric" is ready to roll whenever that guy in the tower comes out of his trance.

In the broad aisle just outside the cab door, with his feet braced wide apart, Superintendent Art Heidicke reaches beneath the ample front of his grey tweed coat for his watch. Al flips his own timepiece from the bib pocket of his striped overalls, then grunts.

"My watch is off."

The boss frowns and his square jaw tightens. "I have 8:29 on the head." His hazel eyes glint down the white gravel between the rails, then swing to meet those of the motorman.

"Why, that would make us two minutes to the good before we hit the main stem!" Al exclaims before he thinks. "That is impossible."

Ernst blushes, then, for his blunder. It would set the whole trainroom to laughing if he were sent up for discipline after being the lucky guy to take her out on the first trip with pay passengers.

The super seems not to notice, though he had insisted that the new equipment should be used by regular crews, who should keep their present schedules.

Tensely Al eases back on his mohair seat and lets his eyes run down the array of reset switches operating from all cabs: destination sign, upper and lower classification lights, defroster, windshield wip-

er, instrument light, cab light, and two body light resets. Below the horn toggle are the brake-reset, power-reset, and control-positive. Al frowns. He hopes he hasn't forgotten anything. There is even a button to uncouple hydraulically from the cab. No jumper between cars, other than the complicated one below the coupling itself.

Oldsters still outnumber the new cars in this shop scene. *At right*, an open-vestibule type with steam-coach roof; *at left*, Monitor roof and closed vestibule. Both are still in service

Al rests a cautious hand on the single chrome handle which controls both power and brakes from the eight 55-hp motors operating through hypoid gears in the quiet Clark trucks. To the left, she goes; to the right, she stops. Automotive brakes come in while the electrodynamic brakes lose power when the motors are practically stopped. Al still feels it's unnatural to horse the motors by putting his handle over. But these motors are merely shunted at four braking rates, and it takes the reverser key to actually reverse 'em.

Cyneston. Al studies the word stamped on the housing. It is a far cry from the old brass top, but to him it is still a "controller." Whatever its name, it controls a car with three miles per second acceleration, just as the committee which anticipated the new Chicago Transit Authority specified. She brakes at the same rate, too, and soft as a blanket—unless you throw on the track brakes for good measure. Al glances right, at his old air-brake handle on the new track-brake post, recalling how sore Conductor Sam Battaglio got when Al slammed them all on at once out in the yards.

"What are you trying to do?" Sam had demanded from the middle of the three compartments; he'd come forward then, cussing and holding a banged elbow. Al had acted innocent, but he'd learned how it felt to have them all on. For a minute, it had seemed like he was going through the safety glass.

Now Superintendent Heidicks was staring ahead. "Say! We have to wait for the hotshot," Al suddenly recalls. "Can't cut him out." He means the crack train of the CA&E morning rush from the Fox River valley section.

"No!" Art Heidicke snaps and takes a quick step toward the cab door. The fast train has not shown. The clock has caught

Subway express was never like this. First of the new three-compartment, steel articulateds. Colour is aluminum and gray with four red strips running lengthwise of the body

up with them. Suddenly the board clears green.

Al jerks erect and clicks his controller down out of "dead man" then throws his control left to the fourth and last point. He's choosing his rate of acceleration all right. If they are to lead the hotshot in, they've got to move fast. For a second, he feels something almost like a nudge from the rear. Al takes a brief glance across his shoulder, then grins sheepishly. Sixteen motors under two alloy cars, mean "go" in any language.

The boss stoops to peer backward out of the side windows as they wheel around the curve and onto the main line to the Chicago loop. No sign of the express. The climbing hand of the speedometer catches Al's eye, and he hastily eases off, tripping the foot pedal to hold her out of emergency as he lets the handle rise at "off" position. "Forget about your power being on point four for ten seconds and you will pass thirty," Art Heidicke had told him. "Forget it another ten, and you may pass on to glory or some place."

Above: **Curved sides recall Cincinnati Car Co. types; give more passenger room while top and bottom dimensions allow regular clearance. Inside, heating and ventilation are as automatic and dependable as the three sets of brakes**

Tank engine from Rhode Island Locomotive Works at Chicago elevated station platform in the '90s. Waiting rooms are at ground level, below stairs. Right-hand operation of elevated trains was not uniform until consolidation of Chi's independent lines in 1913

Boy, does this baby roll! That next crossing is coming up like a bridge being lifted at three points. Al swings his handle right, to number three braking point. Fourth might be too much like the big hole on his old Westinghouse. It seems strange not to have any air in the train. Maybe he will try number four, at that. He braces a hand against the window frame to balance the forward swing of his body and plugs her. Not bad. Even with the track brakes, the ride is smooth, although definitely steep.

Eyed by the usual line of surprised down-town workers, Al pulls her up at the first station.

"Is this train for just anyone?" A tiny woman with a trailing blue ostrich feather atop a shapeless hat asks the question. Al grins and jerks his head backward toward the nearest of the three pairs of folding doors on his side of the head car. "Twelve feet of loading space on each side who stepped into the front compartment, and surveyed the rust-tinted seats in a frame of tubular chrome, under an ivory ceiling, and within aqua walls. Finally he sighed and leaned heavily upon his broom. "So. She bend. She breathe. She heat herself. Why she no sweep the floor?"

However poorly she does the sweeping, there is nothing wrong with her heating system. In winter, the surplus heat of the resistors is blown through ducts in the seat supports; in summer, automatic dampers exhaust it outside. There is never any lack of fresh air from the overhead ventilators in each car. In especially cold weather, electric coils give added heat.

They have glided to a swift stop now. Bert reaches a hand within the control

Retired from regular service, this CTA oddity, Number 2721 has baggage doors installed in 1919 when car was used on the CNS&M interurban line

of these cars," the boss had said. "Loading stops should be much shorter."

BACK in the rear car, Bert Guerra is telling a story to lanky Inspector Roy Rourk. Leaning a pudgy hand upon the door control post, he recalls the "hunky" receptacle to the three tiny levers there. A single curl of his fingers opens the battery-operated folding doors. "Watch your step!" Passengers crowd in. Quickly he closes the rear door as it clears; then the front; now the door before him.

The instant the door sections touch, Al

Chicago Rapid Transit's two electric locomotives, S104 and S105. Since 1920 these Baldwin-Westinghouse products have performed as switchers on the North Side lines, which run regular interdivisional service with the South Side. Prior to 1913, North Side trains ran left-handed, and took the Loop's outer track clockwise

has her on four points. No signals. No lost motion. He just puts his power on, and lets the safety circuit kick her off. Saving the ten seconds at each stop means getting down town two minutes sooner. Improved acceleration and braking can add a total of from five to ten minutes more. Al calls for all that the new equipment has. They beat it into St. Louis run-around, and still have the green board.

Grinning, he decides: "I must tell the old man about this. A ride on this equipment might get him all wound up like his first ride on the Chicago Elevated Railroad did back in '93. Mom's eyes might sparkle again like they did on her first ride behind those wonderful dummy engines out along the lake front to the Columbian Exposition." He laughs out loud. But that old stuff *was* stupendous in its day—despite the cinders in your hair, and the outdoor feature of the first electrics. Al recalls the cynical, slim, old "car knocker" in greased overalls, who shifted a chew to the other side of his long, taciturn face while he studied the new job from coupler to rear trucks.

"Pretty keen?" grinned the proud motorman as he eased her past, and into the station.

"Oh, I dunno." The old codger spat. "Looks like a swivel-jointed mechanical centipede to me."

Well, every generation to its own choice. As for him, he'd take this new job.

One crowded station follows another. Jammed by the crowd against his door control post, Bert Guerra complains: "We never had this many on other mornings. Some of these people must be getting this train just for the ride."

Smitty grins. "Well, let's give them one, then."

Approaching Marshfield, Al takes a nervous glance at his watch. Art Heidicke speaks from outside the cab door.

"Put that watch away. You are loaded to the chains. Play safe, but see what she will do."

Just before the crossover, with a fast train swooping down the incline at right. These Lake Street trains also ran left-handed before "Met" amalgamation took place

The long stream of roofs and yards flow past in swift succession. Now the Main Post Office and Union Station loom ahead. Still no hotshot in sight. Then, as they skurry across Chicago River drawbridge and wheel past Market Street tower, the head of the fast train flashes into view on the curve behind them.

"Made it!" crows Al, jerking his eyes back to the tracks ahead.

Art Heidike is staring at his watch. "Yeah, and now that train clerk at Franklin Street is going to have a problem: should he call us the 9:01 according to schedule, or the 8:55 instead?"

Carbarn Comments

Steve Maguire

WITH summer, increased activity is apparent in the work being done by the several groups who are trying to preserve representative streetcars and interurbans as museum pieces for future generations. You may recall the frequent references in this column to car Number 21 of the Ohio Public Service Co. This fine old wooden interurban was one of the earliest pieces of equipment obtained by a group of railfans for preservation. It was used on many fan trips along the OPS out of Toledo in the middle 1930's; when the line abandoned passenger service in 1939, car 21 was presented to a group of fans in northern Ohio. No location had been picked for it, so it remained at the Oak Harbor, Ohio, barns of the OPS (now Toledo & Eastern) until 1946, when the Oak Harbor portion of the road was abandoned.

Unfortunately, the northern Ohio fans still had no place to put the body which was rapidly becoming weather-beaten, and for a period it appeared that the car would have to be scrapped as it stood. Fortunately, a newly-formed fan group at Columbus, the Central Ohio Rainfans Assn., engineered the removal of the car to a location in their vicinity.

The CORA now has taken over 1000 feet of right-of-way from the old Columbus, Delaware & Marion interurban line at Worthington, Ohio, and is restoring it for operation by car 21. Already 132 feet of track had been laid. Members of the Maintenance of Way Department of the Pennsylvania RR have assisted the group, helping to engineer the project and donating second-hand ties. The Federal Glass Co. of Columbus has also helped by furnishing used rail.

V. C. Underwood, Treasurer of CORA, is asking for contributions of money or material from all who are interested in building the trolley museum into an operating unit. Donations may be sent to Mr. Underwood at 73 East Gay St., Columbus, Ohio.

Along the West Coast the East Bay Railfans Assn. has been accumulating a representative group of trolley museum pieces, and now owns six electric railway cars, reports George Chope, Oakland, Calif. These cars have not been removed to any private track but are being stored at various railway properties, including the Chico, Calif., shops of Sacramento Northern, the Key System shops and the San Diego barn. The cars include SN Birney car 62, Key System 271 (said to be a former Lehigh Valley Transit car), Salt Lake & Utah observation trailer 751, Napa Valley car 53, an ex-Third Ave. Ry. car from San Diego, and a gas-electric motor car obtained from a Nevada railroad line.

At New Haven, Conn., the well-publicized Branford Electric Ry. Assn. keeps adding to its equipment with cars donated by the Connecticut Company from its remaining operations at New Haven. The Connecticut Company plans to end all streetcar service by the end of the year. Although the track connection with BERA has been broken by abandonment of all lines into East Haven, the BERA now has a very representative group of ex-Connecticut Company cars, in addition to others from scattered parts of the East.

The lady may have the New Look, but car Number 4 is definitely of 1900. She sported an oil headlight on the roof as she rattled over Brattleboro, Vt., streets

In Maine, the Seashore Electric Ry., first railfan group in the U.S. to obtain a car for preservation (Biddeford & Saco open car 31), now has eighteen pieces of equipment stored on its property at Kennebunkport, Me. During last fall when forest fires ravaged miles of woodland on all sides of the Seashore property, only the efforts of several members and caretakers saved their cars from the fire which swept by the property. The Seashore members fought the blaze for three days and nights with backfires and dirt.

Late in December, 1947, the entire overhead wire of the Joe Cushing Railroad at Fitchburg, Mass., was purchased by the SER, a move that will make possible the erection of additional overhead to permit operations by electrical power as soon as a generating unit is secured. The outfit is now in search of such a unit at a cost within the limits of the budget of the Seashore group's pocketbook. Anyone who can locate such a generator is requested to contact the SER at 10 Spring Hill Ter., Somerville 43, Mass.

* * *

NEW PUBLICATIONS. The Connecticut Valley Chapter of NRHS, owners of several pieces of trolley equipment stored on their property at Warehouse Point, Conn., have issued a history of the streetcars in Brattleboro, Vt. *Trolley Days in Brattleboro* contains eight illustrated pages and copies can be obtained at thirty cents each from Roger Borrup, Warehouse Point, Conn.

A supplement to the All-Time Roster of Pacific Electric Ry., was been issued by Ira Swett, editor of *Interurbans*. The supplement consists of ten pages of photos and data on cars obtained or reconditioned since the original issuance. Most of the 35 photos appearing in the supplement are collectors' items. Cost of a copy is fifty cents. Those interested should write to Ira Swett, 1414 S. Westmoreland Ave., Los Angeles 6, Calif. In case you missed obtaining the original Pacific Electric roster, we suggest you ask Mr. Swett if any more copies of that booklet are available.

* * *

STRIKES. North Shore line of the Chicago-Milwaukee interurban seems to have a general strike each decade. Back in 1938, all operations ceased as a result of a strike by employes for raised wages. Again in 1948 the rails are rusting as the result of a general tie-up.

Even with Electroliners the North Shore line cannot easily get out of the red. For over ten years it was in trusteeship but the income during the late war enabled it to reorganize. Now, with profits decreasing and two general wage rises ordered, the operators of the line claim they cannot raise wages further. The future of one of America's greatest interurban lines is definitely in jeopardy.

A form letter has gone out from Presi-

Texas Electric interurbans lined up in the Dallas yard. Dallas saw similar abandonments on the Texas Interurban Ry., which operated over electrified MKT trackage under supervision of Katy dispatcher. TIR was discontinued in 1931 and her cars took to Dallas street runs

dent Griffin of the Texas Electric interurban line to all stock and bondholders of TE, stating the entire road will be abandoned on account of excessive costs of operation. Application is now being made to the I.C.C. for permission to end operations.

* * *

CORRECTING an error in our April issue: Electric Railroaders' Association membership dues are two dollars per year, with a one dollar initiation fee for the first year. Memberships in ERA are still open to all; and with each membership, the monthly magazine, *Headlights,* is distributed free. Averaging fourteen pages each month, *Headlights* is crammed full of news, car rosters and track maps. For information write ERA, Lackawanna Terminal, Hoboken, N. J.

Ohio Public Service car 21 at Toledo, Ohio, October of 1938. Now owned by railfans, Number 21 is being reconditioned for operations on a Columbus, Ohio, fan road

Photos by the author

Siskiyou Shortline

By JACK R. WAGNER

TRUE TO shortline traditions the engine crew of the Yreka Western doubles in brass. So even though there wasn't a train due to leave until late that night, it wasn't unusual to find Engineer Harold Thomas and his fireman, George Calkins, puttering around the enginehouse at three in the afternoon. Thomas stopped cranking the blower of the forge long enough to remove his glove and shake hands. His manner was quiet and mild. Calkins was up in the cab of Number 8 so we climbed abroad to talk to him.

George Calkins turned out to be the oldtimer on the road. He has seen equipment, managers and owners come and go, but through good times and bad, George has remained philosophically a fireman of locomotives. When he was a young man, George took a job digging a mine shaft. It payed better than most jobs at the time—about two dollars a day—but George wasn't satisfied. One of these days, he reasoned, this shaft will be down as far as they want it to go. Then what? No, there wasn't any future to digging a hole in the ground. Someone had told him they needed a man over at the Yreka Railroad and that's where George went. The pay wasn't nearly as good as his previous job. Still chances were that the railroad would be running long after the miners had hit bottom.

Lush consist for the Yreka Western. Only twice in 60 years has this California community hauler seen trains of Pullmans; the occasion feted above was the arrival of the Espee band for Siskiyou's county fair

George's new connection did meet his needs for a steady job. If he secretly had hoped to find the work easier, however, he was doomed to disappointment. Those were the days of wood-burning locomotives, when the fireman not only pitched the cord wood into the firebox but loaded the tender at every fuel stop; sometimes he even found it necessary to cut his own wood. During the dry season he occasionally added another connotation to the title *fireman*, attempting to extinguish the conflagrations started by sparks from his locomotive.

All the while he talked, George was busy about his engine. He poured some oil on a bundle of waste, looked at it thoughtfully for a moment, then touching a match to the wad he suddenly flung it through the fire door. Immediately afterward there was a dull explosion and almost at once the firebox became a roaring inferno. Raising his voice as he adjusted the oil feed, Calkins announced—with no dramatics at all—that he had once fired a locomotive on bacon grease. And so as we sat on the sandbox absorbing the warmth of the fire, we heard the amazing story of the locomotive that ran on bacon grease.

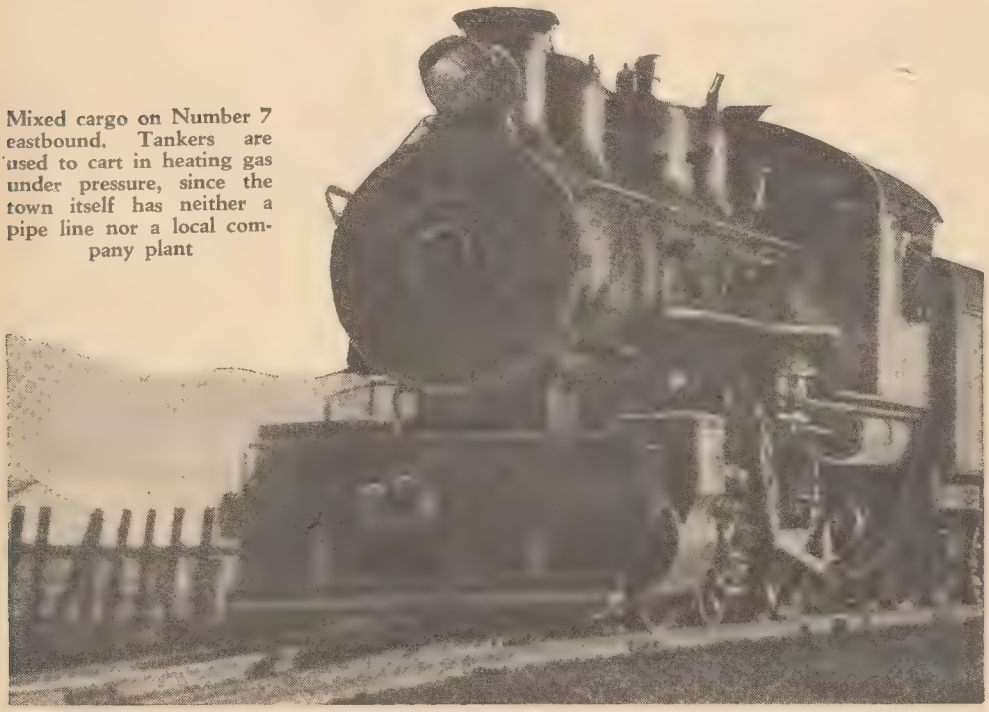
During the wood-burning days of the Yreka Railroad, one of the local merchants received a shipment of hams and bacon that were spoiled. While the locomotive was on a siding near the unusable shipment one day, the owner who was anxious to get it out of sight asked Calkins if he wouldn't throw the cured pork on the tender and dump it in the river,

Home guards. The four crewmen *left* comprise 20 percent of Yreka's employe roster. Lined up are Engineer Harold Thomas, Fireman George Calkins—oldtimer in service — Conductor Al Glutsch and Brakeman Otis Tyrer

Number 7 *right* stands frothing at the mouth, while her crew takes on buttermilk hotcakes at the nearby Montague beanery. The shortline offers two roundtrips daily with a 20-minute timecard between Yreka and Montague

or anyplace out of town. Always willing to lend an assist, Calkins loaded up with the ham and bacon.

But once they were underway, the engine crew began to speculate on how they could best get rid of their cargo. In an experimental mood, Calkins tossed a side of ham into the fire. It went up like gun powder, giving off an intense heat like no stick of wood they had on board. After that, the spoiled pork was carefully stowed in a corner of the tender. Whenever the little locomotive needed extra power, a huge plume of black smoke could be seen



Mixed cargo on Number 7 eastbound. Tankers are used to cart in heating gas under pressure, since the town itself has neither a pipe line nor a local company plant

coming from the stack, and for some time after the train had disappeared over the hill, the aroma of crisp bacon or juicy baked ham lingered mysteriously.

THE LITTLE city of Yreka, California is the headquarters and main excuse for the railroad, as well as the county seat of Siskiyou County. As such it is the hub around which turns the governmental, social and industrial life of a rich inland empire. The county itself—located in north central California near the Oregon border—contains a great variety of topography, climate and natural resources in its 6,256 square miles. It is larger than the states of Connecticut and Rhode Island combined; but generally speaking the territory is a mountainous region, generously supplied with wide fertile valleys.

The first white men to enter what is now Siskiyou County were trappers from the Hudson Bay Company at Vancouver, Washington. Alexander McLeod in 1827, Jedediah Smith in 1829, and Stephen Hall Meek in 1835 were among the first noted. Then in March, 1851, with the entire state in the throes of gold fever, two prospectors named Thomp-

son and Bell discovered ore on Yreka Flat. The site became known as "Thompson's Dry Diggin's" and within six weeks some two thousand people had arrived to see for themselves. Eventually a local government was formed and an "alcalde" named.

By the spring of the following year, the region had sufficient representation at the state capitol that a bill was introduced in the legislature to create the County of Siskiyou and change the name of the town to Yreka. Yreka it was. Five years later it became an incorporated city.

The visitor may think of Yreka as charmingly situated in the heart of the mountains, but local businessmen have quite a different angle on this: its picturesque location was one reason why the Southern Pacific preferred to come no closer than eight miles. And lack of direct rail transportation was a definite handicap to a growing but inaccessible community. When no rail promoter came forward with a plan, a group of local citizens finally decided to take the situation in hand. They proposed a railroad from Yreka to connect with the Southern Pacific at Montague. It was a community enterprise, and according to the original charter still hanging in the company office at Yreka, things got under way officially on the twenty-eighth day of May, 1888.

There is little information available on the actual construction of the road, and there were few construction obstacles to make it a dramatic story. The grade east of Yreka was fairly easy, a maximum 2.3 percent. No tunnels were needed and only six short trestles appear along the right-of-way. The largest is the one across Shasta River.

Except for the fact that the first locomotives used were woodburners, perhaps the greatest contrast between early and present-day operation lies in the road's source of revenue. According to company records, sixty-seven percent of the earnings used to come from passenger business; today what few passengers they carry are picked up by bus and that figure is somewhat less than one percent of the total revenue.

Like so many well-meaning community projects, the little railway was not exactly a profitable proposition. However, it did manage to keep rolling for sixteen years or so under local management, though there were no big dividends issued. According to an entry in the books for June 6, 1904, Joseph Johnson then got the idea of extending the road into Scott Valley, the rich farming area of the county. Johnson may have had something there; but nothing ever came of it.

LATE in 1905, the firm of Scott & Van Arsdell began dickering for the purchase of the Yreka Railroad. They, too, announced their intention of extending the rails into Scott Valley, perhaps as far as Etna. Finally in April, 1906, the deal was completed. On the seventh of April, 1906, at a meeting of the Yreka Railroad Board of Directors, the new owners took over their property.

When the old board members had resigned one by one and the directorate was composed entirely of Scott & Van Arsdell men, the election of officers was held. G. W. Scott, emerged as president—of Hall-Scott marine engine fame—and the future of the Yreka looked bright indeed: new capital, new owners and plenty

of enthusiasm. All of these factors when combined pointed toward the final fulfillment of the Scott Valley extension. But the optimism of local residents and the new directors lasted just eleven days.

on and the automobile acquired enough horsepower to negotiate the roads of Siskiyou County, conditions grew worse for the little railroad. In a last ditch effort, the Scott company introduced what was to be-

Copy of a company photograph taken during construction days—1888. Wooden trestle shown is one of Yreka's six; no tunnels were needed

On the morning of April 18, 1906, the San Francisco earthquake smashed all hope for the Yreka Railroad. Not that property damage extended as far north as Yreka; but the financial effects did. Scott and his associates were hard hit by the quake and resulting fire; their willingness to invest additional money at this time was badly shaken. Plans to enlarge the road were canceled immediately and the Yreka line was left to operate as best it could.

Hard times followed. The population of Yreka remained about the same as it had been when two thousand gold seekers arrived over fifty-five years before. As the years wore

come standard equipment for nearly all small roads out to slash operating costs: a gasoline-propelled combination passenger and baggage coach. Whether it was the first model or not is debatable; but this early "skunk" was typical in appearance of those to come and was driven by a 60-horsepower gasoline engine—undoubtedly a Hall-Scott.

Yet, even economy matters proved little help. The Scott & Van Arsdell Company decided to give up. At this point the citizens of Yreka, not wanting to see their city left without a rail connection, organized a second time for direct action. By popular subscription they raised enough

Courtesy of Ernest Brazil

Woodburner Number 1, pride of the 1890 roster, with her crew aboard: Engineer Archie De Samontonia standing in the gangway, Fireman Jack Frizell below

money to buy back their line; on April 6, 1920, the Yreka Railroad Company again belonged to the people. Subsidized by the local citizenry, the shortline managed to keep up steam for another eight years. Finally in 1928 the property was sold to the Klamath River Holding Company of which H. A. DeVaux was president.

THE NEW owners announced great new plans for the eight-mile shortline, and once again employes took new hope. But for a second time fate held the trump. It was 1928! The depression years that almost spelled ruin for many of the country's great systems were all but fatal to the Yreka Railroad. All possible corners were cut to eliminate all but vital expenses. Even maintenance of the right-of-way seemed a luxury the management could ill afford.

As a result ties turned up at the ends and spikes were so loose that frequently the weight of the locomotive would turn the rail completely over. The gage varied by an unbelievable amount; when rails were the same height, it was only when the undulations passed each going in opposite directions. A trip to the Southern Pacific junction at Montague was usually made more on the ground than on the rail, and four miles an hour was considered top speed. Sometimes the run lasted days. It's a safe guess that the Yreka Railroad contained more grief per mile in those trying times than any other carrier in the country.

Yet in spite of everything, the railway continued to operate under DeVaux's direction. DeVaux was a typical promoter, and to all that is said about him—both good and bad—must be added credit for seeing the Yreka through its darkest hour. There is little doubt that DeVaux was somewhat of a "sharper" with a flare for putting up a good front. As an insight into his methods and personality, the people of Yreka still tell a story of his trip to Florida one winter.

While trying to forget his troubles

at a fashionable beach resort, DeVaux felt the need of indulging in his favorite "vice"—the best and most expensive cigars. Without much worry about the ethics he called on the most exclusive cigar manufacturer in town. Presenting his business card—introducing himself as H. A. DeVaux, president of the Yreka Railroad Company—he glibly made his proposition. With a little flattery here and there, he explained to the cigar maker that he was interested in obtaining the best cigars money could buy for his road's dining car service. So after a brief conversation, DeVaux left the store with a goodly supply of "samples" under his arm, a box each of the fifty cent and one dollar variety.

Had the cigar maker been a rail-fan, or had he had even consulted a copy of the *Railway Guide,* he would have known that the Yreka Railroad offered little service of any kind. But least of all, dining-car accomodations.

In August, 1933, the Yreka Railroad underwent the throes of reorganization, emerging later as the Yreka Western. Apparently little but its name was changed, however, for conditions failed to improve. Hitting a new low in 1938, the property was listed in a judicial sale and foreclosure where it was purchased by Vince Delano and Carl W. Fawcett. With O. G. Steele as receiver, the new operators tried to continue service on the run-down shortline.

But about this time a practice carried during the lean years threatened its very existence. The railroad which had seen so little cash just couldn't bear to turn over to the Southern Pacific its share of the freight money collected at the Yreka end of the haul. The Espee brought suit in the Superior Court and it looked as though the Yreka Western had seen its last day. Then in stepped A. D. Schader, a San Francisco railroad contractor, and puchased the Southern Pacific's claim. The amount was sizable enough to indicate that Schader is actually the present owner of the Yreka Western.

Of late business is much better and the little terminal at Yreka is a beehive of activity. Superintendent W. L. Miner and Auditor Paul R. Dodge are handling the administration of the company and supervising its twenty employes efficiently and enthusiastically. The roadbed is now only slightly less than first-class, with good 75-pound rail. Power is provided by two steam locomotives, Number 7 and Number 8, formerly under the banner of the State Belt Railroad of San Francisco. The engines are both in good shape.

Since 1938, shipping has jumped from the five cars a week to about thirty each night. Passengers are carried by company buses, while mail and express come in by trucks, operated by the road. This leaves the rails free to handle carload shipments in or out of Yreka, the county seat and shipping point.

As on many of the mountain roads today, lumber and logging activity is responsible for a good part of the prosperity. Some of this, of course, is temporary. But even so, if conditions remain at all favorable, the Yreka Western can expect the larger mills to ship via its rails for at least another ten to fifteen years. And then other shippers help pay the way with a variety of commodities. Perhaps the most unusual of the Yreka Western's regular loads are the tank cars of the local gas company. Without a pipe line or local manufactur-

ing plant, all of the community's heating gas is hauled into Yreka in special tank cars under pressure and then released into the gas company's storage tank.

Siskiyou County is rich in agriculture, and mining keeps business quite active. Ever since the days of "Thompson's Dry Diggins'." Siskiyou has been a leading producer of asbestos, barite, chromite, clay, coal, copper, gems, lead, limestone, manganese, marble, mineral water, platinum, pumice, quicksilver, sandstone, silver and stone. Its annual production of gold alone amounts to half a million dollars. So with luck it should provide profitable carloads for its rail line.

Once again things are looking up for the Yreka Western. If fate doesn't interfere a third time the shortline has, we hope, seen its last of rusting rails.

Lcl Pickup. A Yreka Western truck backs up against a New Haven boxcar at Montague, where the Yreka Western and Southern Pacific swap freight. Only carload shipments travel into and out of Yreka by rail

Big sticks mean big revenue for the YW. Since 1938, freight loads have jumped from 5 cars weekly to 30 per night, while logging cars stretch the length of Montague's yard, awaiting transfer to the sawmills

Yreka: railhead barricaded by the Siskiyou Mountains. The steam crane *at left* is one good reason why the road'll have heavy hauling for at least another decade. It was gold, however—not lumber—that brought the original settlers to Thompson's Dry Diggin's

Three o'clock workout. Number 7's wan headlight adds little brilliance to a gray dawn as the engine chuffs up Butcher Hill. Her daily schedule calls for a departure at 3:10 a.m., return to Yreka at 4:05

Quotations Yours

By PAUL McGUIRE

DEAR ROADMASTER: Your all foremen letter of 8th inst. It is amazing that you are at a loss to understand the poor showing of thirty-six personal injuries which we had on this division in 1946. You really should have all the facts by now and not have to guess at the cause of them. But to assist you in understanding this condition, I wish to advise that it is not entirely our own fault (that we) "are not safety-minded," "have poor supervision" (all up the line), "and a lack of cooperation" (from the Management). Quotations yours, parentheses mine.

Your previous letter concerned the necessity of getting a big day's work done. Lifting a quotation verbatim from the Bard of Avon: "There's the rub!" A section foreman's greatest concern in life is not his home, his family, his neighbor, his country or himself; it's not five o'clock, payday, wine, women or song. From the beginning, it has always been, and will be to the end—even though he knows he is damned to a place hotter than that high cut at milepost 56—the uncontrollable desire to get a big day's work done.

As griever for all the gandys on this division, I hear their complaints in this order of repetition: "What can you do about the foreman bringing us in late?" "What can you do about him running the motor car so fast?" "What can you do to make him flag the curves?" "What can you do about him working us in the rain?"

Never has one of them complained that the boss was working them too hard or too fast—they're all taiched with the same fever and their pride wouldn't permit them to mention it anyway. Furthermore, in many cases the kingsnipe is doing as much or more work than any of them.

Where does the abstract idea of safety fit into that concrete picture? And who is responsible for the state of mind of these section foremen that leaves room for only one obsession—to get a big day's work done!

I've been around this road for thirty years and I don't recall of ever having been given any safety instruction, excepting at one of those rare council meetings which many foremen never attend.

Remember that fiasco when the safety supervisor tried to tell us how to break a rail and our necks at the same time? Remember the letter I wrote you about looking to the Track Department for at least one supervisor and then the three other trainmen who were appointed safety supervisors a short time later? Safety on this railroad is like trying to neck a widow—lots of talk but that's all.

The records show that most accidents fall on track men. They also show which tool causes most of the accidents. Is it the claw bar we use to pull spikes from the ties? Show one of our standard claw bars to John Fanchar of Woodward, Oklahoma and he'd swear it's the same one he used to lay steel in 1877. Most other Class-I roads adopted a safe claw bar many years ago; but we continue saying, "Watch your little fingers now," when a gandy picks up this relic.

Why is it true that all over the division I see the greenest men in the gangs handling the track jack? Why do I have to force a man to operate it? Why did one of John Cline's men take his bean-can and walk to town rather than take the chance of getting injured by it? You have the answer in a copy of my letter to the safety supervisor.

Of course, the management is interested in our problems. Didn't they write us a nice letter about being good to this thing—to be sure to brush its teeth every day and oil them—the very thing that should never be done! And more—after noting the increasing number of injuries from this monstrosity, they sent us printed

Look at the real killers, boss, the motor cars. And *you'll* have to do the looking, because no one else ever does

instructions from the manufacturer warning us not to let inexperienced men use it! This very day my most inexperienced man got a hell of a wallop when the teeth failed to engage. I advised him to be careful what he called the designer, since he might be an old man by now.

Should I tell you again about shipping them to the storekeeper every few months and getting them back in the same condition? Sure, I know other foremen use them for years, the injury records prove it.

NOW LET'S study that indispensable aid to navigation—the lineup. The ICC has recently held several companies responsible for loss of life because of bum lineups, which caused me to wonder if there was some other kind. Suffice it to say that lineups issued at 5:00 a.m. for eight o'clock jobs don't even come under a literal interpretation of good railroading, nor do those "all regular trains on time and extras about as usual."

I note that some agents refuse to sign or date them and others refuse to ask for them until after a long delay which encourages negligence. I also note that roadmasters have as much difficulty about them as do section foremen and track inspectors. Aside from safety, a good lineup is of considerable help in getting a good day's work done on the track.

I'll accept the management's consolation that the tools we use don't cause many serious accidents, even if they do cause a lot of them. Let's look at the real killer-dillers—the motor cars. It's obvious that you and I will have to do the looking, because no one else ever does.

The only time anyone ever looked at my motor car was when it was out of service! Why can't an expert check these cars periodically, to see if they are functioning properly, to see if they are too large or too small for the gang that's using them, and of greateset importance—to see if they are safe? Why couldn't that technician make certain that the motor cars and trailers are properly oiled and lubricated, that the brakes operate properly and that the rail sweeps are satisfactory? I know that all things are covered by "the rules", but I also know that motor cars have been dismantled with axles that were cut almost entirely.

I have seen many motor cars with brakes mis-applied and only about twenty percent effective; several of them had one front wheel riding up on the rail. One had the loose axle stuck for lack of grease, a trailer with every board in the deck broken. A number of them had oil cups that didn't fit my grease gun; tool racks with big holes; gasoline leaks in various places, and other things irregular for one reason or another.

Did I ever tell you of my correspondence with G. R. Westcott, the Missouri Pacific Assistant Engineer and his interest in my method of taking the jerks out of motor-car operation? Do you know any jerks around here that are concerned about such a triviality or any generality either? Do you recall that there have been times on this division when not a single official had any concern whatever about safety? That at other times, when there was someone interested, two or more others offset what little good he tried to do?

Remember when the most reckless galvanizer on the division was set up as an example for the other foremen to emulate? How many were caught in their own traps? Remember when an extra gang foreman piled up his gang with instructions in his pocket to roll them out to work as fast as possible? Remember the hotshot whose only remorse for a serious accident was that he lost his chance for promotion?

Superintendent Willis is the only one of a hundred or so officials for whom I've worked who ever said one practical word about safety. I hope I quote him correctly. As his words sank into my mind, they were, "Damnit, I don't want the foremen to make a hand. I want them to supervise the men and see that they work safely!" Strange that a foreman would listen for thirty years before he heard anything resembling that!

He will make his place in history even

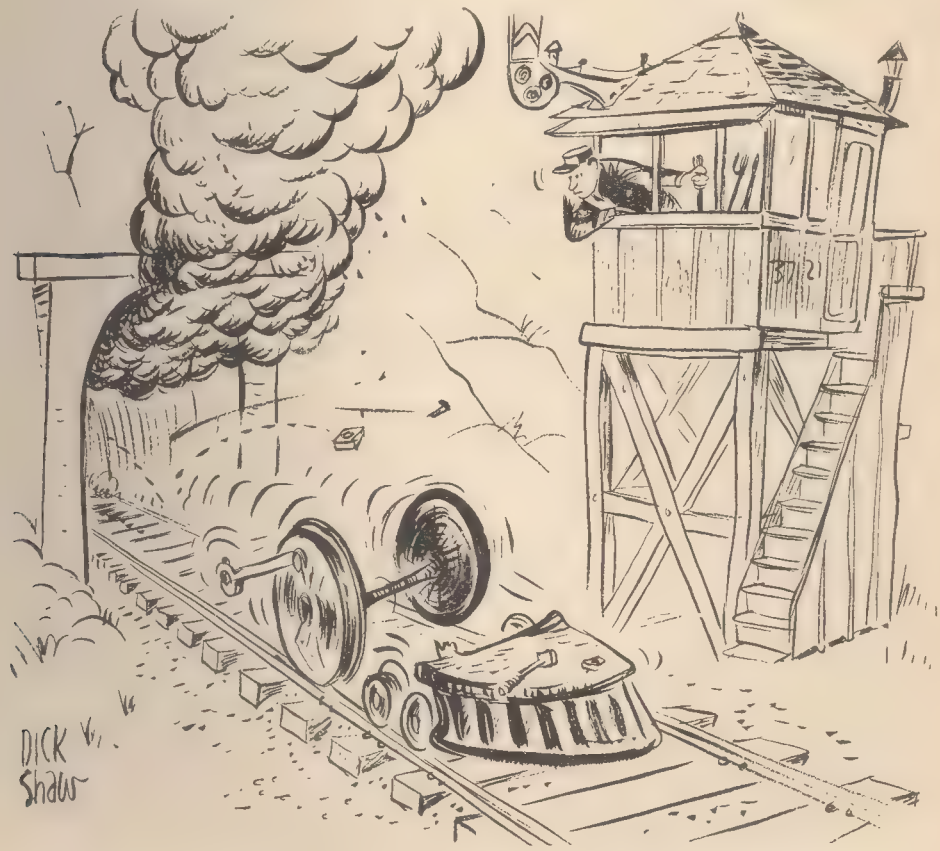
more secure when he tells them, "If you put a man in a dangerous place or give him a dangerous tool (and which one isn't) without proper instruction and careful supervision, you are certain to get him injured, this time or the next."

Have I mentioned it before, or is this the time and place to tell you, that some of your foremen and for a certainty, few if any of your men, know how or when to flag? They are confused about the rules, their rights, their privileges and their full duty to the company and trainmen.

So much for the past. Here's a suggestion for the future. What we need more than anything else is a friend on the safety-side. Someone who can convince us that we'll not be penalized for taking time to be careful. Someone to stand between us and inconsiderate roadmasters, division engineers and superintendents. Someone to educate us into believing that safety is of first importance, explaining to the entire gang how most recurring accidents happen. He should insist tactfully that tools must always be safe to use, properly stowed on the cars, and that responsibility for the observance of safe practices is the responsibility of each employe.

This will have to be someone who will command respect, a man who knows the intricacies of track work, its customs and manners; not some eager-beaver out to learn the answers. He'll have to love us in spite of our cussedness and be willing to bear with us until we can willingly change our ways and not "write us up" for dirty necks and motor cars.

Safety, like any other article of faith, may be promulgated on a piece of paper; but it doesn't mean anything to a man until he accepts it as a way of life. The only sure way of getting a big day's work done tomorrow is to work safely today.

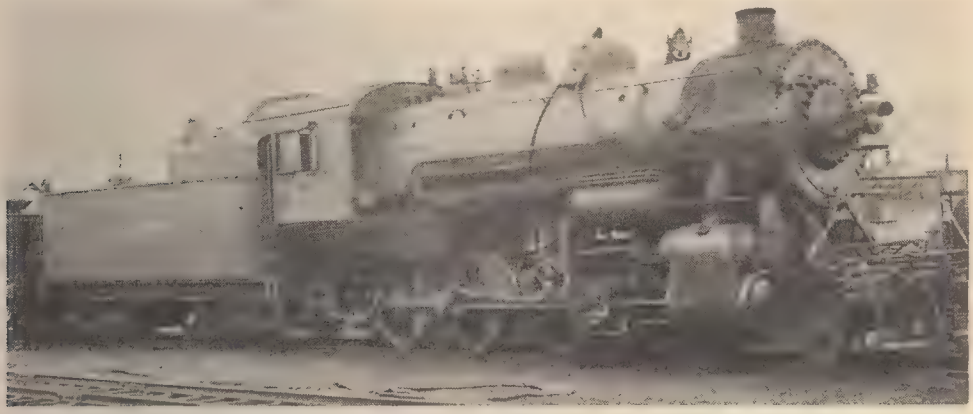


Locomotives of the Chicago & North Western

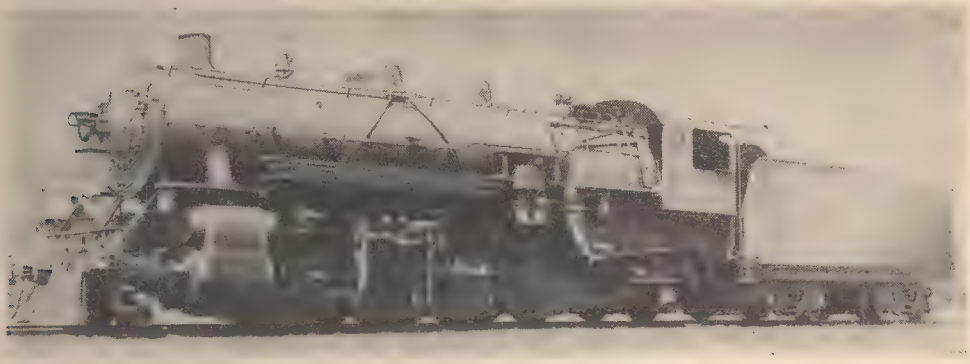
Steam Locomotives

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
			0-6-0 (Switcher) Type				
M-1	2016, 2019, 2023–2025, 2027, 2031, 2034, 2035, 2040, 2041, 2043, 2049–2051, 2061–2063, 2065, 2067, 2068, 2072–2074, 2078, 2084, 2088, 2091, 2092, 2094, 2101	18 x 24	51	180	140,500	23,300	R.I., 1905, 06; Schenectady, '07-12; '14-16; Cooke, '17; Baldwin, '13
M-2	2111–2115, 2118–2121, 2123–2130*, 2132–2137, 2139–2142, 2145–2148, 2150	21 x 28	51	180	184,000	37,000	Schenectady, 1916; Brooks, '17; Dunkirk, '22, 23
M-2	2151, 2152, 2155–2157, 2159–2162, 2164, 2166, 2168, 2170–2173, 2175–2180, 2184	21 x 28	51	180	174,500	37,000	Schenectady, 1916; Brooks, '17; Dunkirk, '22, 23
M-3	2601, 2603–2606, 2608–2615, 2617–2631, 2633–2635	21 x 28	51	180	163,500	37,000	Cooke, 1919; Schenectady, '19
			0-8-0 (Switcher) Type				
M-4	2636–2643	25 x 28	51	185	231,000	54,000	Richmond, 1927
			0-10-2 (Switcher) Type				
J-1	491, 492	27 x 32	57	205	297,400	71,300	Baldwin, 1917
			2-8-0 (Consolidation) Type				
Z	1479, 1483, 1484*, 1489, 1490, 1493, 1703*, 1705*, 1707, 1715, 1716⅌, 1735*, 1739⅌, 1748⅌, 1761*, 1771⅌, 1775, 1776, 1778, 1779, 1788⅌, 1794, 1800⅌, 1801–1803, 1811*, 1813*, 1814*, 1822⅌, 1823, 1826, 1828, 1832, 1839*, 1841, 1846, 1849, 1852, 1855*	25 x 32	61	185	209,500	51,600	Schenectady, 1909–13; Baldwin, 1900
Z	1869, 1870, 1873, 1875*, 1879⅌, 1880⅌, 1887⅌, 1895, 1902⅌, 1909	25 x 32	61	185	214,500	51,600	Schenectady, 1909–13; Baldwin, 1900
			2-8-2 (Mikado) Type				
J	2301⅌, 2304⅌, 2305, 2306⅌, 2308⅌, 2309, 2310*, 2311, 2313⅌, 2315⅌, 2316⅌, 2317*, 2318*, 2320, 2321, 2322⅌, 2323⅌, 2324, 2327⅌, 2329*, 2330⅌, 2332*, 2334⅌, 2336⅌, 2337*, 2338, 2340, 2342⅌, 2343⅌, 2344, 2345*, 2346⅌, 2347⅌, 2348, 2349⅌–2352⅌, 2354⅌–2357⅌, 2359⅌, 2360⅌, 2361*, 2364⅌, 2365⅌, 2367⅌–2370⅌, 2372⅌	27 x 32	61	185	229,500	60,100	Schenectady, 1913–17; Rich., '18–21; Dunkirk, '22, 23
J	2373⅌, 2375*, 2376⅌, 2379⅌–2381⅌, 2383⅌, 2384⅌, 2386⅌–2395⅌, 2397⅌–2400⅌, 2402⅌–2404⅌, 2406⅌–2409⅌, 2411⅌, 2412⅌, 2414⅌–2417⅌, 2419⅌–2432⅌, 2434⅌, 2435⅌, 2437⅌, 2438⅌, 2442⅌, 2443⅌, 2445⅌–2468⅌, 2471⅌–2482⅌, 2485⅌, 2487⅌, 2489⅌–2492⅌, 2496⅌–2502⅌, 2505⅌, 2508⅌–2512⅌, 2515⅌–2520⅌, 2522⅌–2525⅌, 2527⅌, 2530⅌	27 x 32	61	185	{ 229,500-B { 233,000-Y	60,100	Schenectady, 1913–17; Richmond, '18–20; Dunkirk, '22, 23
J	2533*, 2535⅌–2540⅌, 2543⅌, 2544⅌, 2546⅌–2549⅌, 2551⅌–2553⅌, 2556⅌, 2560⅌, 2562⅌, 2563⅌, 2566⅌, 2568⅌–	27 x 32	61	185	233,000	60,100	Schenectady, 1913–17; Richmond, '18–20; Dunkirk, '22, 23

0-6-0 switcher works the Milwaukee garden. Tender is above-average capacity for this type of power



Above: Big-boilered *Consolidation* 1855 photographed at Kenosha, Wisc., by the late Harry H. Schodde. *Below:* Mikado 2485 carries the Richmond builders' plate of the American Locomotive Works



Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
J	2571※, 2573※, 2575※–2577※, 2580※–2583※, 2586※–2590※, 2592※, 2594※, 2595※, 2597※ 2598※, 2599※, 2701※, 2702*, 2703※, 2704*–2710*	27 x 32	61	185	234,500	60,100	Schenectady, 1913–17; Richmond, '18–20; Dunkirk, '22, 23

Photo by R. Peters

Handsome example of the Ten-wheeler type: R-2 Number 422 at Freeport, Ill.

Photo from Tom Mohr, 5237 N. Moody Ave., Chicago 30

High-drivered Atlantic 397 is another favorite of mid-west engine fans

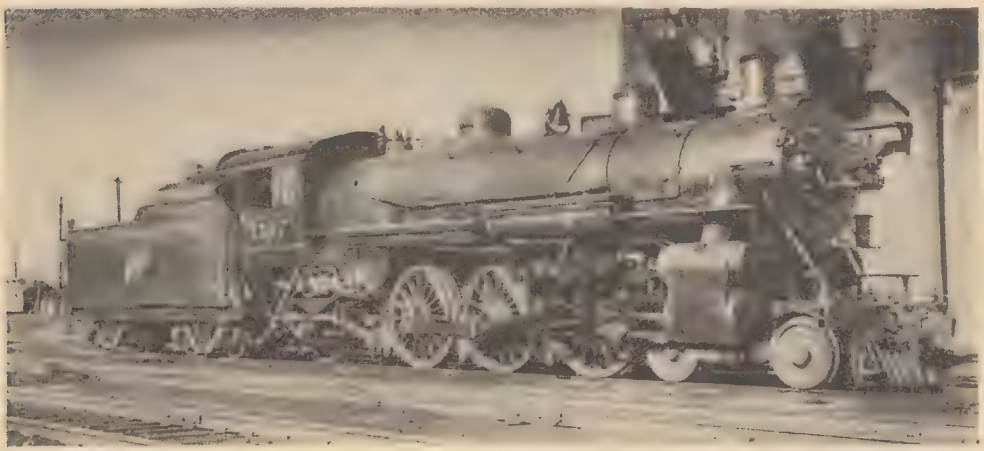


Photo from Tom Mohr

Light *Pacific* 1597 stands ready for the main, her coal pile trimmed and blower roaring

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
J-A	2493–2495, 2503, 2504, 2506, 2507, 2513, 2514, 2521, 2526, 2528, 2529, 2531, 2532, 2534, 2541, 2542, 2545, 2550, 2554, 2555, 2557–2559, 2561, 2565, 2567, 2572, 2574, 2578, 2579, 2584, 2585, 2591, 2593, 2596	27 x 32	64	200	237,000	62,000	Schenectady, 1913–17; Richmond, '18–20; Dunkirk, '22, 23
J-A	2600	27 x 32	64	200	238,500	62,000	Alco, 1923
			2-8-4 (Berkshire) Type				
J-4	2801–2812	28 x 30	64	240	253,500	67,200‡	Dunkirk, 1927
			4-4-2 (Atlantic) Type				
D	113, 126, 395, 397, 399, 482, 1016, 1017, 1020, 1022, 1023*, 1096–1098, 1297, 1298*, 1299, 1307, 1316	20 x 26	81	200	{ 92,500-S { 97,500-W	21,800	Schenectady, 1900–08
D	158, 394	20 x 26	81	210	97,500	22,900	Schenectady, 1900–08
			4-6-0 (Ten-Wheeler) Type				
R-1†	18, 29, 38, 50, 62, 76, 160, 168, 172, 175, 178, 236, 237, 287*, 289, 291, 344, 345, 348*, 349, 359, 376–379, 383*, 385, 386, 388, 406, 411–414, 416, 422, 429, 441*, 442, 444*, 446, 448, 449*, 450, 453–455, 458, 462, 463, 467*, 470, 472*, 474*, 478, 479, 481*, 486*, 487–490, 555, 594*, 595, 894, 899, 910, 912*, 916, 917, 922, 923, 924*, 925–927, 934, 935*, 936–939, 952, 1066, 1067, 1068*, 1069, 1071, 1072*, 1079*, 1107, 1108*, 1113, 1115, 1117, 1118*, 1119, 1121*, 1122*, 1124*, 1125, 1127–1129, 1133, 1134*, 1135*, 1140*, 1142, 1144, 1146, 1148, 1149*, 1151, 1152*, 1153–1156, 1157*, 1158, 1159*, 1160*, 1162, 1165, 1168, 1169, 1220*, 1222, 1230*, 1231*, 1323, 1324*, 1325, 1326, 1329–1332, 1337, 1338*, 1340*, 1341–1343, 1346, 1353, 1354, 1356*, 1358, 1360*, 1362*, 1366*, 1368*, 1371, 1374*, 1376–1378, 1379*, 1380, 1381, 1383, 1384*, 1385, 1386*, 1387, 1389*, 1396, 1398, 1400, 1401*, 1402–1404, 1406, 1407, 1408*, 1409, 1410, 1412, 1413, 1414*, 1415, 1417, 1418*, 1419, 1422, 1423* 1425, 1426, 1427*	21 x 26	63	200	{ 136,500-W { 127,500-S	30,900	Schenectady, 1901–08; Baldwin, '03–08
R-1‡	159, 161, 440, 445, 456, 457, 911, 1073, 1075, 1103, 1109, 1123, 1221, 1344, 1350*, 1352, 1372, 1373, 1390, 1395*	21 x 26	63	200	{ 139,000-W { 130,000-S	30,900	Schenectady, 1901–08; Baldwin, '03–08
			4-6-2 (Pacific) Type				
E	1502, 1503, 1505, 1509–1512, 1514, 1519, 1522, 1524–1526, 1531–1533, 1534*, 1535–1538	23 x 28	75	200	154,000	33,600	Schenectady, 1909–10
E	1540, 1542, 1545, 1546※, 1547, 1548※, 1550※, 1551※, 1554, 1555, 1557–1559, 1560※, 1564, 1565, 1566※, 1568※, 1569, 1571, 1574, 1575※, 1577※, 1578※, 1579	25 x 28	75	185	154,500	36,700	Schenectady, 1910–12
E	1581※, 1582*, 1583–1587, 1588*, 1589※–1591※, 1592, 1594, 1595※–1598※, 1600, 1601*, 1602※, 1604※, 1605※, 1607※, 1608※	25 x 28	75	185	163,000	36,700	Schenectady, 1913–15
E	1610※–1612※, 1614※, 1615※, 1617※–1620※, 1622※–1627※	25 x 28	75	185	164,500	36,700	Schenectady, 1916–17
E	1629※, 1631※–1636※, 1638※–1647※	25 x 28	75	185	168,500	36,700	Schenectady, 1921
E	1648※–1667※	25 x 28	75	200	174,000	39,600	Schenectady, 1922–23

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
E-1	56, 117, 123, 407, 890, 941, 942	22 x 26	69	185	134,500	28,700	Schenectady, 1910
E-1	2203–2205, 2207*, 2208, 2210, 2211, 2216*, 2218, 2220	22 x 26	69	185	138,500	28,700	Schenectady, 1913–16
E-1	2223*, 2225	22 x 26	69	185	139,000	28,700	Schenectady, 1916
E-2A	2902, 2903, 2907, 2908	26 x 28	79	225	178,500	45,800	Schenectady, 1923
E-2B	2901, 2904, 2906, 2909–2912	26 x 28	79	225	180,000	45,800	Schenectady, 1923
			4-6-4 (Hudson) Type				
E-4	4001*, 4002*, 4003*–4006*, 4007*, 4008*, 4009*	25 x 29	84	300	216,000	55,000	Alco, 1938
			4-8-4 (Northern) Type				
H	3001–3003, 3006, 3007, 3010–3012, 3015, 3017, 3021, 3023–3027, 3029–3031	27 x 32	76	275	288,000	71,800⌅	Baldwin, 1929
H-1	3004, 3005, 3008, 3009, 3013, 3014, 3016, 3018–3020, 3022, 3028, 3032–3035	27 x 32	76	275	288,000	71,800⌅	Baldwin, 1929

Diesel Locomotives

Numbers	Drivers	Horsepower	Engine Weight	Tractive Effort	Builder and Date
		B+B (Switcher) Type			
1000–1002	38	300	130,000	32,500	Ingersoll-Rand, 1926, 27
1201	40	600	206,000	51,500	EMD, 1939
1200	40	600	216,000	54,000	Ingersoll-Rand, 1930
1202	40	660	199,000	49,750	Alco, 1940
901	40	900	254,000	63,500	EMD, 1940
401–403	33	380	88,000	22,000	Whitcomb, 1941
1203, 1204, 1206	40	660	199,000	49,750	Alco, 1941
1003–1005	40	1000	230,000	57,500	Alco, 1942
1205	36	650	160,000	40,000	Whitcomb, 1942
1207–1212, 1214, 1215	40	600	196,000	49,000	EMD, 1942
1213	40	660	199,000	49,750	Alco, 1942
404, 405	33	380	88,000	22,000	Whitcomb, 1943
1006–1014	40	1000	230,000	57,500	Alco, 1944
1024	40	1000	240,000	60,000	Baldwin, 1944
1025–1035	40	1000	230,000	57,500	Alco, 1944
1036	40	1000	240,000	60,000	Fairbanks-Morse, 1944
1223–1229	40	660	199,000	49,750	Alco, 1944
1232–1236	40	660	199,000	49,750	Alco, 1944
408–410	33	380	89,800	22,450	Whitcomb, 1945
1037–1045	40	1000	240,000	60,000	Baldwin, 1945
1237–1246	40	660	199,000	49,750	Baldwin, 1945
1046–1051	40	1000	240,000	60,000	Baldwin, Fairbanks-Morse, 1946
1247–1252	40	660	199,000	49,750	Alco, 1946
1015	40	1000	230,000	57,500	Alco, 1947
1052, 1053	40	1000	240,000	60,000	Fairbanks-Morse, 1947
		B+B (Road Switcher) Type			
1080–1081	40	1000	240,000	60,000	Alco, 1944
		A+B (Passenger) Type			
5001, 5002	36	4000	415,600	103,900	EMD, 1939
5005, 5006	36	4000	420,000	105,000	EMD, 1941
5007 (A unit)	40	2000	225,000	56,250	Alco, 1941
5007 (B unit)	36	2000	210,000	52,500	EMD, 1945
5008, 5009	36	4000	420,000	105,000	EMD, 1946
5010–5016	36	4000	424,000	106,000	EMD, 1947
5017 (A unit)	36	2000	212,000	53,000	EMD, 1947
		A+B+C (Freight) Type			
4051–4054	40	4200	699,000	174,750	EMD, 1945–47
4055–4063	40	4500	699,000	174,750	EMD, 1947
4065, 4066	40	4500	800,000	175,000	EMD, 1947
		A+C (Freight) Type			
4064	40	3000	458,000	114,500	EMD, 1947

* *Oil-burners*
※ *Equipped with automatic stokers*
B *Baker gear*
Y *Young gear*
W *Walshaert gear*
S *Stephenson gear*
† *Class R-1 with original boilers*
‡ *Class R-1 with new boilers*
⌅ *Class J-4 has t.e. of 79,500 with booster; H and H-1 have t.e. of 83,200 with booster*

Photo by Jack Pfeifer, 132 McGee Ave., Council Bluffs, Iowa

Although outweighed by Milwaukee and Santa Fe Hudsons, larger cylinders give C&NW's 4-6-4s the highest tractive effort developed by any engine of this wheel arrangement

North Western's *Northern* types have been completely rebuilt since this photo was made. The famous H Class was a sensation at the 1933-34 Chicago World's Fair

Streamliners may come and streamliners may go but the canary-yellow-and-brown *City of San Francisco* will always be a highlight of rail operations west of the Windy City. Her insurpassed schedule is made possible by three-unit Electro-Motive locomotives like the SF-4-5-6

Brakeman Comes Back

Sometimes an Oldtimer Flags as Short on the Main-line of Human Relations as the Dumbest Greenhorn

DUSK was settling over the narrow canyon through which the busy two-track railroad climbs to the Continental Divide. A Mallet, half as long as a city block, dragged sixteen cars of Pacific veterans up the grade into Wilburn and stopped in front of the passenger station to change crews and locomotives.

All the enlisted personnel in the rear Pullman except Sergeant Farrel, who had been in train service when the war began, left the car as soon as the wheels stopped. He had been the first out at other stops, but now he remained in his seat, staring

By E. S. DELLINGER

disconsolately into the gloom until the officer in charge of the train appeared.

He, too, was an ex-rail, a train dispatcher off some Eastern line. Puzzled by the strange phenomenon of a railroad man staying out of sight in a terminal, he paused.

"Isn't this your old stomping ground, Farrel?"

The sergeant laughed shortly. "I broke over this pike five years before I went to work for Uncle Sam."

"Then how come you're not out there on the platform shaking hands with your old friends?"

Farrel turned back to the window as if he hadn't heard. Four years ago, here at Wilburn, he had been fired off his railroad job. He'd gone into the Army nursing a bitter grievance against the man who had fired him and the company which he represented. Four years living in foxholes, creeping through stinking jungles and lying in base hospitals had not les-

sened his resentment. But, presently, as he heard the lieutenant leave, Farrel grew restless. Soon, he put on a mackinaw and went to the vestibule, then out and across to the cigar stand. Icy wind was slipping over the brick walk. He had not remembered the place as being so cold and dismal. Smog gloomed over the passenger station and shrouded the freight yards where red, yellow and green signal lights glowed through the leaden dusk. The squat, smoke-stained, yellow roundhouse was barely visible at a thousand feet. Beyond it, the top of the railroad "Y" was only a gray, pencilled shadow.

As he limped up the platform, he met railroaders hurrying by on their way to work. Many of them he had known well, but no sign of recognition showed in their eyes. He was not surprised, except faintly, as a man always is, at not being remembered. His right leg had stopped a fragment of the shell that blasted his barge to bits in a landing operation, and he had left a piece of his face on a field of glorious victory. No, he was not surprised, he thought, but an extra bleakness settled in his cold, blue eyes. He turned in under the wide eaves and stood against the brick wall, grimly watching the railroaders stride by with grip, or torch or shiny lantern.

An old engineer emerged from the station and came unsteadily up the walk lugging a battered black tin suitcase. Even before Farrel could read the inscription, he knew that both sides of this ancient relic were stencilled in faded white with the name, THOMAS SHANNON. Old Tom Shannon came within arm's reach, glared at him from red-rimmed eyes set beneath bushy gray brows, muttered a gruff, "Howdy, soldier!", and hobbled by.

Then the old runner's hobbling steps faltered and stopped. He faced about and a frown of recognition formed on his withered face. After a moment of indecision, he came limping back, stripping the dirty gauntlet off a big right hand. He stopped in front of the soldier, and planked the battered suitcase on the platform.

"Ain't you Ed Farrel's boy?"

"Yes, I am." The ex-shack's voice was crisp and frosty.

The gruff, hard-faced old throttle jerker held out the bare hand bent and calloused from fifty years' gripping the cold steel of a throttle lever. The soldier looked at it.

Between him and it was a wall of hatred built up during years of conflict. The foundations of this wall had been laid the night Old Tom had driven him out of the cab to ride the tops through a pelting hailstorm. The wall itself had been built through a long struggle between trainmen and officials for the right to the cab down the mountain grades. It had been crowned the day Shannon's son, Trainmaster Mike, had fired him for smoking into Wilburn against another freight.

Shannon ignored the slight. He pulled on the gauntlet, and remarked that Farrel had changed.

"This war has changed many men!"

"That's right, Farrel, it shore has. It's changed them that stayed home as well as them that went away. It's even changed hard old coots like me."

Farrel waited while a switch engine went by on Number 1 track with a cut of ore cars. When the noise of its passage had died down, Shannon continued:

"Two of my grandsons was killed in the fight over Germany."

"Mike's boys?"

"Yes." The stooped veteran runner nodded vigorously. "The two oldest ones. They was fighter pilots in the 8th Air Force. They was both shot down in the same raid over Berlin. It sure has made an old man out of Mike."

Farrel swallowed. "Sorry," he said; and then again, "Sorry." The engineer extended his hand again, and this time the soldier took it. Both men cleared their throats noisily, and Shannon remarked that "Ma was getting feeble," that he himself was "all crippled up with the rheumatiz," and that he was retiring that night from the service.

The old man was garrulous, trying to reach out with friendship toward the man his son had injured. "I been railroadin' sixty years, young man, runnin' an en-

gine over this mountain since 1890. When I take Third Number 2 into Echo Valley tonight, I'll wind up fifty-five years on the right-hand side of the cab. I've piloted a train over three million miles without ever overlooking an order, runnin' over a flag, or runnin' by a red board."

FARREL nodded stiffly. "A good record," he remarked. The old hogger thought so, too. He said he had been told that Farrel had brought honor to himself and credit to the town where he had been born. "Congressional Medal, was it?"

"That's right, Mr. Shannon."

"I suppose you'll be coming home now to claim your old job on the strength of your war record?" he went on, smiling wisely.

The soldier stiffened. After a minute he said harshly, "Trainmaster Shannon fired me for cause—so he said. I won't ask him to reinstate me."

The engineer picked up his suitcase and paused, as if there were something else he would like to say if he only knew how.

While he fumbled for words, the outgoing crew came to take charge of Farrel's train. A young brakeman in blue and gold strode jauntily down the platform carrying a fancy handbag, an electric lantern, and his flagging kit. He paused to say in the bantering tone of reckless youth:

"Hi-ya, Gran'pop. Do I have to ride with you tonight?"

"Naw, you don't, smarty. I'm called to handle Third Number 2."

The boy strutted away. A carlength away, he shouted back:

"Be careful, Gran'pop! Don't break no speed records just because you're makin' your last trip. And don't overlook your orders, nor run over my flag, nor run by any red boards."

"You're the one needs to be careful, Tommy," the old man called in a tone of ominous warning. "You keep on your toes. If you stop on the main line, hit the ground with both feet movin' fast. Don't let me catch you doin' a job of tailhose flaggin', because you're on a passenger train and another one right behind you."

"Don't you worry, Gran'pop. You can't run over me, because the block signals an' me won't let you."

Old Tom vented a snort of disgust. He had always despised brakemen, especially the smart young ones.

Farrel chuckled softly. "Your grandson?"

"Ye-aah! Mike's youngest kid. He shore ain't no credit to the family tradition of safe railroadin'."

He turned abruptly and hobbled toward the roundhouse. Mist had thickened. Snowflakes were whirling and eddying through it. Most of the boys had returned to the warmth of their cars. The conductor came down the platform calling:

"B-o-a-r-d! B-o-a-r-d! A-L-L ABOARD!"

Farrel joined his buddies and boarded the train through an open vestibule. He sauntered back to the lounge in the rear end of the last wooden Pullman. A giant road hog and a low-wheeled mountain helper lifted the train out of the Wilburn yards and settled down for the hard climb up the crooked miles to Snowy Summit.

For more than three hours, the big engines labored on. Wooden Pullmans creaked and groaned and leaned left and right as they took the banked curves. A dozen men sat in the lounge smoking and chatting.

Farrel did not join the talk. His mind was lost in the maze of memories. Some of them were not pleasant memories. He lived again his boyhood years, when he had been riding his father's waycar up and down these slanting rails. A slip of his father's foot on the icy top of a moving car. A plunge into the gorge . . . The eternal struggle for food and shelter of a widow and her young son. And then his entry into train service, weeks of student blunders, that first trip over the hill when Old Tom Shannon had driven him out on the car tops with hailstones big as marbles hammering down upon him.

This experience had drawn him into the fight to have the archaic "decorating rule" stricken from the code. He had taken an active part, had argued that brakemen could watch trains more efficiently from the ends than from the middle; that since the engineer controlled the train brakes from the engine cab, a trainman's presence on top was never required, that he was merely a "decoration." He pointed to vital accident statistics to prove that more men had been killed in falls from the tops of moving cars on the second district than from all other causes put together.

The Shannons, father and son, had opposed the change —Old Tom because he made brakemen ride the tops over the hill, Mike because he believed opposition to it would strengthen his position in high official circles.

The men had won their fight, and the officials had consented to replace the old rule by two new sections, one requiring the company to install a trainman's cupola on each engine tank, the other requiring head brakemen to ride these cupolas "club in hand, ready to go out on top and set brakes in case of emergency."

Mike had not accepted defeat graciously. He had vowed to eliminate every trainman who had opposed him. The war brought him his chance. Echo Valley, Farrel recalled, had been a madhouse, and Wilburn little better.

Methodical movement of men and munitions to the coasts. A tunnel cave-in blocking the northern main line. Traffic detouring over the second district. Eighty trains a day streaming through the bottleneck at Snowy Summit. Wrecks on the main. Trains running against the current of traffic. Every trip had been an ordeal.

On his last trip, Farrel had been called to handle an ammunition train west. At Snowy Summit, he had received an order to detour around a wreck, using the eastbound main line as single track. Fire in a car of shells, a train forgotten while the crew put it out, had given Mike the chance for which he had been waiting. He had fired Farrel and the rest of his crew that night, and now when other men were coming home to claim their old jobs, Farrel had none to claim.

IT WAS cold out in the vestibule; snow sifted in on the platform. Tommy Shannon soon sauntered back inside, selected a comfortable nook, ensconced himself in it and set his electric lantern between his feet. The boys talked themselves out on girls, grub, jungle fights and atomic victory. One of them, noticing the brakeman listening to their stories, inquired:

"What outfit was you with, brakie?"

"None," young Shannon snapped.

"Flat feet or somethin'?" This from a lean, lanky corporal from the Arkansas hills.

"Nope. Deferred for essential industry."

To some of the boys who had been taken out of their jobs in "essential industry", this was not a perfect alibi. One of them commenced telling Arkansas how this "fancy pants" had stayed home to play with the girls while real men were fighting a war. Others soon took up the ribbing.

It was getting pretty rough. It was also getting under the kid's skin, when Farrel tuned in on it.

"I wouldn't romp on the lad too hard, fellows. He used to have two brothers. Both of them was shot down over Germany. Besides, he's not as old as you think he is. I doubt if he's old enough right now to register for the draft."

The impulsive lad from Arkansas was quick on his feet, offering a hand in sympathy. The young brakeman accepted apologies; but he soon left the lounge and went to stand on the back platform.

He rode there all the way up the hill. The porter made down the beds. Singly and in pairs the boys turned in until only Farrel was left when they reached the tunnel. After they had started down the 130-mile descent into Echo Valley, young Shannon stuck his head in at the lounge door. Seeing Farrel alone, he came in and sat down.

Somewhere in the first thirty miles the kid mumbled a few words of thanks, then asked:

"Aren't you Jack Farrel?"

Farrel admitted his identity.

"I guess you'll soon be reporting back for duty, won't you?"

"Not here, kid. Your old man fired me. Remember?"

"I didn't know about it. It must have happened while I was away in school."

"Could have."

The wheels clicked off ten miles, knocking them off at the rate of one a minute now. The soldier smoked a cigarette. The young brakeman gathered his courage, then:

"I sure wish enough of you guys would come back to bump me off this extra board."

"Don't you like railroading at all?"

"Hell, no!"

"Then why are you at it?"

"Old man wanted me to, and it was that or else—"

"I thought rules kept an official from hiring his son on the district where he was working."

"They've shut their eyes to a lot of rules during the war. They had to to keep the trains running. Besides, this is not my regular job. I belong on the Kansas Division."

"Single track over there, eh?"

"That's right."

"How do you like double-track railroading?"

"I've not had time to find out. This is my first trip on the double track."

The train had been rolling smoothly and swiftly down the easy grade. The slack went in under a light service application; and the engineer whistled a high-pitched *Wheeee whe-whe-wheeee* in answer to a caution light in the block signal semaphore beside the track. The youth picked up his lantern and retired to the platform where his flagging equipment waited. The engineer reduced speed to thirty miles an

hour, rolled his train for another mile, stopped for a red block and whistled out his flag.

The Shannon boy took two fusees and some torpedoes from his kit and went down the steps. It was still snowing and a good four inches lay on the ground. Rules required him to go back a half mile, put two warning torpedoes on the rail, return halfway to his train and stay there until he was called in or overtaken by a following train.

Tommy did not do it that way. He knew, as every brakeman knows, that on a railroad equipped with block signals, unless the electric blocks fail to work, there is always a caution light and a red one behind him. The position in which they had stopped told him that his protecting block was nearly a mile behind. Since Gran'pop Shannon was pulling throttle on Third Number 2, he saw no use in taking that mile walk through the snow. Gran'pop never ran a signal and never exceeded the ten-mile an hour speed limit under which trains were required to proceed through a red block.

He walked back about six hundred feet, laid down his guns, returned halfway, and waited a hundred yards from his tail lights, stamping his feet and whistling a dance-hall tune.

Short flagging, or tail-hose flagging, or platform flagging—Farrel was thoroughly acquainted with the practice. His first impulse was to go back there, give the kid a good cussing, and send him back where he belonged. But Farrel was not educating student brakemen. He was merely a passenger on the train. Telling himself that unless the blocks failed to work, which happens only one time in a million, the train was safe, he returned to the lounge to smoke. He even chuckled a little over the way this reckless youth was breaking the Shannon tradition of perfection.

They were stationary for half an hour. The conductor came up from the head end. Seeing the reflection of his light on the window, Farrel went outside and stood on the platform. The conductor strode past the rear, blistered the official's shirking kid with a hot lecture on short flagging, and sent him walking back toward Snowy Summit.

Farrel assumed that the skipper had merely come back to check on his flagman, to make sure that he was giving proper protection to the train. He hadn't. He boarded the rear car, and stood beside Farrel on the platform with the fine snow sifting in about them.

"Trouble on the line?" Farrel asked.

"Yep," curtly.

"Troop train ahead of us in the ditch?"

"Yep." The conductor, a man Jack had never seen before, was annoyed.

"Anybody hurt?"

"I wouldn't know, soldier. All I know is the track is blocked ahead of us so we can't go on."

"So you're going to back up to the crossover at Center, and run against the current of traffic on the westbound main till you get around the block?"

"That's right."

The skipper's tone was less curt. It was not every returning soldier who knew that when the eastbound main is blocked, you go through a crossover to use the other track. He wanted to know if Farrel had been in railway service before the war. Briefly, Jack said that he had.

The flagman's lights disappeared in the snow. At the end of twenty minutes, the conductor signalled the engineer to back away. The train moved slowly up the grade, while the skipper stood by ready to pull the air in case of emergency.

It was cold outside. Farrel went in. For more than an hour, they moved slowly up the grade. When they backed through the crossover at Center, Third Number 2, with Old Tom Shannon in her cab, was taking coal and water. As they ran by the telegraph office, the operator handed them up an order to use the westbound main from Center to Givens, about twelve miles east.

It was now past midnight. Farrel should have been in bed long ago; but the tension caused by his homecoming and

the sight of familiar scenes and faces kept him awake. He remained in the lounge.

TOMMY SHANNON caught the rear, left his flagging kit on the platform, shook off the snow and joined him there. Tommy's five-mile tramp through the deepening snow had neither improved his temper nor increased his love for his job. Dropping wearily onto the frayed green plush of the resurrected Pullman, he growled:

"Damn this railroadin'! If I ever get into Echo Valley, I'm goin' to run away from home, join the Navy, and see the girls."

Farrel might have advised him to see them from the deck of a boxcar instead of a battle cruiser; but he saw that Tommy was in no mood to receive advice. He kept silent.

The engineer wheeled swiftly through the storm. Near the point where they had stood two hours ago, the train shuddered to the sudden application of emergency air. The men on the rear did not know it then, but the engine had just missed ramming head-on into a car which had toppled from the wreck while the men were working on it.

Tommy Shannon jumped up, swearing, and hurried out of the car to flag Gran'pop Shannon and Third Number 2.

Farrel did not follow him to the platform. Snow was now four inches deep in the vestibule, and the temperature falling rapidly. He decided to turn in. Old Tom Shannon's disgruntled grandson had flagged short at the last stop. He would probably flag shorter at this one. But why should he worry? Short flagging was the concern of Young Tommy, his conductor, his Gran'pop and Superintendent Mike. The train was in no danger because there was a red board protecting them—a mile—behind—

The idea of a red board slowed his mental stream, stopped it still. He recalled a half-forgotten detail of running trains on double track. He had already started toward his berth. He whirled and strode toward the rear.

The Shannon kid had flagged short an hour ago. Then there had been little real danger because they had been running with the current of traffic. A train running *with* the traffic on double track, holds a block signal and a caution board behind it always.

Now they were running east on the westbound main. Now they were holding no protecting signal behind them, because a train running against the current of traffic holds no signals behind it. Did Tommy Shannon, making his first trip on double track, know that? Had anyone thought to warn him? Had he sufficient interest to figure the thing out for himself?

Farrel limped to the door, jerked it open, and peered out. Through the falling snow, he could see the dim glow of a red light and a white one. The flagman, disgruntled and sore because the conductor had chewed him out an hour ago for flagging short, was flagging shorter now. He could not have been an inch over four carlengths from his tail hose.

"The fool!" Farrel swore. "The *damned, ignorant, bigoted* fool!"

Hatless and coatless he plunged out to the platform, grabbed a handful of fusees and two torpedoes from the flagman's kit on the vestibule gate. At the top step, he faltered for one brief instant. This was the chance of a lifetime to even an old score with the Shannon dynasty.

All he had to do was get off the train and watch them hit. And they would hit—*how* they'd hit! If Old Tom Shannon came roaring down that grade as he had a right to do, with neither block, flag, nor gun to warn him until he was within five hundred feet of the tail lights, his big hog would plow through those old wooden

Tom Shannon's voice broke. "I'll write you up. Not even my own grandson can short flag me and get away with it"

coaches like a rifle ball through cardboard. A whistle screech—a startled yell—the hiss of air—a splintering crash—

Farrel shuddered . . . He saw now a broken old man coming home on his last run—a feeble old woman, mourning for her grandsons, waiting at the end of the run—those soldiers ahead, who had gone through hell and come home to live.

He hit the ground running as fast as his crippled leg would let him. The two trains had been spaced ten minutes apart out of Center . . . He was shouting:

"Get back there and stop that train!"

Tommy Shannon did not run. He did not even walk. He stood in the snow, spilling talk.

"Who do you think you're talkin' to? What right have you to come back here ordering me around?"

Farrel ran and kept on shouting:

"Go on back there. Old Tom's right behind you. He'll come tearing down the hill, and ram into these cars before he can even set his air."

Tommy even laughed. "Old Tom won't run a red board. He never has—"

"You're not on a one-track railroad. You're on double track and running against the traffic. You've got no more flag behind you than a jack rabbit with its tail cut off."

"What are you tryin' to feed me—"

Farrel had not stopped nor even slowed. But the shell fragment in a leg was holding him back. Tommy trotted easily beside him, still amused.

"I'm not trying to feed you anything," Farrel panted. "Cut in your head and start pumpin' your brains. On single track you throw a block a mile ahead of you and hold one a mile behind you. On double track, running with the traffic, you hold one behind you but throw none ahead. Each track is blocked in only one direction. Right now, you have no block behind you at all."

Tommy saw the light. He picked up his feet and took to the air. Swiftly he sped away from the limping soldier, but not for long. A hundred yards ahead was a culvert filled with snow. His toe slipped off an icy tie. He took a nose dive into the track.

Farrel raced to him and helped him to his feet. From up the hill came the sound of Old Tom's whistle blowing for a crossing. That crossing was two miles away. Two miles, two minutes, maybe three.

Tommy tried to run; but he had slipped an ankle in the fall, and his run was a limp and a hobble. Farrel knew he could never make it. Heaving the broken red light to Tommy, Farrell snatched the white one, stripping the cap off a fusee as he ran.

The red flare burst upon the night. It enveloped him in blood mist. Four more blasts of the whistle, the call for the bridge over Crimson River. Before its echoes died away, there was a sound of rumbling wheels racing nearer. Fearing the engineer would fail to see him and go thundering by, Farrel swooped down and fastened one torpedo to the rail.

WHEN he straightened up, the light was showing, a subdued glow at first; then almost before he was aware of it, the full glare of the headlight was in his eyes and he was signalling stop.

Old Tom Shannon had always boasted that he never slept in his cab. Even on this last run of his career, he was living true to his code. He jerked the whistle cord. Farrel washed him out, kept washing him out, kept cutting a crimson swath through the field of white until the pilot was almost on him, then he stepped aside and watched the engine go by.

He had no way of knowing how far from the train he was. He had lost all sense of time and distance. He stood shivering, watching the Pullmans file by.

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He waited tensely for the sound of a crash and the anguished cry of men rudely wakened from their last sleep. There was no cry, no crash. Far down the hill the train had stopped and the engineer was whistling out a flagman from the rear.

Farrel met this flagman coming back. He was coming fast; and he aimed to go far, because he *knew* there were no block signal lights behind him. As he passed by, he called to Farrel to know what had happened to Third Number 2; but he did not stop to listen.

Farrel walked hurriedly past the tail lights, alongside the Pullmans and up to the engine. The engineer, the fireman, Old Tom's conductor, and Mike's kid were on the ground beside the pilot. Evidently the frightened kid had just finished telling Gran'pop why he was there and why Farrel was flagging for him. When Farrel joined the quartette, the grim, stern-visaged old runner was wiping mist off his big goggles. He said, harshly:

"I never thought I'd live to see a grandson of mine fired off this railroad for short flaggin' behind a passenger train."

The boy was too proud and stubborn to offer the didn't-know-it alibi. He looked down his nose. Watching him, Farrel grinned. He felt a kind of elation, the sense of freedom that comes from ridding yourself of bitterness. That righteous old man, suffering because his grandson had not lived up to the Shannon code, was alive because of him. He said easily:

"Must he be fired?"

"He was short-flaggin', wasn't he?" Old Tom was almost crying.

"Maybe he was, but I believe that most brakemen, if they would admit it, have flagged short until they learned their lesson. I think he's learned tonight that short flagging never pays."

"You bet I have," the boy burst out impulsively. "If I should work on a railroad till I'm a hundred, I'll never again hold onto my tail hose with one hand and flag a train with the other, not if I knew all the blocks between here and 'Frisco was lined up behind me."

There was a silence. Then Old Tom forced himself to speak. "Just the same, I'm goin' to turn you in. No brakeman, not even my own grandson, can flag me from the back platform of a passenger train and get away with it. I'm goin' to write you up."

"You won't have to write me up," said Tommy. "I'll report the thing myself and take what's coming to me."

"There was no damage," Farrel argued. "No damage and no delay. The boy has learned a lesson in railroading that he'll never forget. The student hired to replace him might have to learn it—the disastrous way. Nobody knows what happened here tonight except this crew. Why don't you sleep on it, and make your final decision tomorrow?"

Neither the retiring engineer nor the beginning brakeman answered. The obstruction ahead had been removed. The engineer on Second Number 2 was whistling Tommy in. The kid limped away to catch his train. After a minute, old Tom offered his hand to Farrell. His shrewd old eyes glittered.

"I hope you'll believe me, young man, when I tell you that I wanted to say this to you back there tonight on the Wilburn platform. I wish you'd come home when you get out of the Army and ask Mike to take you back into service."

"Would he do it?" Farrel grinned.

"I think he would. Mike's a lot better official than he was when you guys made that slip down there at Wilburn. He needs men like you here now, a lot more of them than he knows where to find."

The engineer ahead was growing impatient, calling for a signal. Tommy shouted:

"Come on, Farrel, if you don't want to get left. I've got to give that throttle jerker a highball. Come on and let's get going."

Farrel ran toward the rear of his own train. He called back:

"Happy birthday, Mr. Shannon! And a long and happy life in the robe and slippers."

"So long and good luck, brakeman. I'll be looking for you home."

Not in the Wheel Report — By Joseph Easley

"Hang it! I said *no* passengers. *Size* has nothing to do with it."

On the Spot

UNLIKE all other timetables we've seen is the new type now being used by the Santa Fe, its distinction being that it carries an individual, easy-to-read time-card for each of the system's transcontinental trains. This includes such data as mileage, altitudes and explanatory notes of various train connections, correct locations to reset watches, rivers crossed and time of crossing, and a list of tunnels on the Santa Fe, their length and the time trains will pass through them.

On the old-style timetables, passengers had to "read up" the columns to determine arrivals and departures of north- and eastbound trains. The new type has no "read up." While it is not intended to take the place of the system timetable, it does give the Santa Fe transcontinental passenger a simplified schedule of the train in which he is riding.

* * *

BOOMER days in Pennsylvania shortly after the turn of the century are recalled by Harry K. McClintock, author of the ballad "Big Rock Candy Mountains" and a contributor to *Railroad Magazine*. "From 1900 to the panic of 1907," he writes, "the toughest blockade in railroad history jammed the Pittsburgh bottleneck with westbound freight. This covers the era when the Pennsy was fighting the Wabash's efforts to get into the Smoky City. There were two big Pennsy yards in that territory, the Conway and the Collier. I never worked in the Collier, but did serve time at the Conway, which in 1907 was 5½ miles long and could hold about 15,000 cars. Even at that, it wasn't large enough, and while I was there they were still building it.

"Conway Yard had three humps, one eastbound and two westbound. Trainmaster R. A. McRae hired every clown (switchman or yard brakeman) who came along, and no extra men ever went home. We had a 12-hour day, showing up at 6 a.m. or 6 p.m. The yardlets filled the 'flat' crews first and signed all remaining men to some hump.

"Hump Number 1, westbound, located right in front of the yard office, was the critical spot and rated about the most important crew on the Pennsy system, east or west. It rated 22 riders, but I saw times when more than 40 men were lugging pick handles on that pimple. A trimmer engine picked up the bad-order cars and the ones that had got into the wrong alleys, and helped to keep a steady stream of cars moving. Two pusher engines alternated in shoving the drags over. As there was plenty of fog (smoke), each hump had a semaphore and an air hooter.

"The Number 1 hump boasted a foreman, a trimmer-engine foreman, a herder for each pusher engine, a pin-puller, and another guy to part airhoses with a sort of hook that enabled him to do the trick without stepping in between cars or engines and cars. Mudhops chalked the cuts, the last car in each cut being chalked for the following cut, as a guidance for switch-tenders. The hump boasted at least a dozen switch-tenders, maybe more.

"In those days the Pennsy would not hire men who claimed railroad experience, but the men came and went in an endless flow, and the officials were in no position to be choosy. They'd hire any boomer who came along if he claimed he'd never had a job except on 'pap's farm.' Investigation of personal records was by no means strict.

"Most of the tramp rails who hit Conway seem to have come from around New York, from the Jersey Central, the B&O, or one of the coal roads in Virginia or West Virginia. There were also a few from the Seaboard Air Line and still fewer from New England. The boys seldom got even as far west as Chicago. Plenty of rail jobs could be had in Buffalo, Cleveland, Ashtabula, or Lorain. A guy didn't

Photo Courtesy of the Nickel Plate Road

On the ready track. Nickel Plate Engineer Hume and Fireman Weaver will shortly back their coaled and watered and sanded Pacific onto a westbound train, make their standing airbrake test, and whistle off along the twilighted south rim of Lake Erie

April cover illustration prompted E. L. Thompson, author of RAILROAD MAGAZINE'S popular series "Timing the Fast Ones", to send us this strikingly similar photo. "The painting was realistic," said Tommy, "but B&O's *Cincinnatian* rarely uses that passing siding in the foreground"

have to be as smart to hold a job in one of those towns as he would for a job west of the Mississippi.

"The lads at Conway thought they were pretty far from home already. Sitting on the porch of the company hotel and looking out over the smoky yard, one of them confided to me: 'I like this Western country so much that I'm gonna stick.' Looking back at the boomer proposition now, after an interval of four decades, it occurs to me that there were a helluva lot of rails who could have been properly classed as boomers but who didn't range very far. Many came pretty close to sticking inside the Chicago city limits. A class known as 'three-I tramps' were said to work only in Indiana, Illinois and Iowa.

"I'd be willing to bet Pennsylvania had its share of 'one-state boomers.' I myself never worked east of Pittsburgh. While out West, I ran into very few boomers who had originated in the Keystone State. Indianapolis ranked fairly close to the top as a rail center, but the only tramps I ever met from there were a couple who worked around Chicago and were regarded by other snakes pretty much as curiosities. The same thing is true of Cincinnati.

"The Midwest and Southwest—cities such as Chicago, St. Louis, K.C., Omaha, St. Paul and Houston—were familiar points of origin for boomers. To mention two specific roads, the Missouri Pacific and the Rock Island made a lot of ramblers."

* * *

THE STORY of the Shepaug, Litchfield & Northern by George J. Flynn (April '48) was appreciated by men who have worked on that road, writes P. C. Blakeslee, Box 72, North Haven, Conn. At the time Mr. Blakeslee went firing on that line it was, as it is today, the New Haven's Litchfield branch.

"There were only two passenger trains a day each way," he recalls. "They came from Litchfield to Bethel, where they connected with trains for New York and Danbury. There was also a local freight. These trains crossed the former New York & New England and the Housatonic railroads at Hawleyville, Conn. In 1905 the *Litchfield Express*, a through train between Litchfield and New York City,

was placed in summer service, but failing patronage forced its discontinuance in 1913. Running these trains in the summers of 1911 and '12 was the best job I ever had.

"After the stone quarries closed down for the reason Mr. Flynn gave, the freight train had dwindling business. Then a large ice-house was built at Bantam. Many a night we used to bring down 27 carloads of ice. We had two small Moguls of the 900 class, long since scrapped. At Hanover hill, south of the Housatonic River bridge, we ran into a sag that seemed like a stone wall; so we dragged the cars as far as we could, then cut and doubled at Hawleyville.

"There we took on a couple of tanks of water and had coffee at Bill Sturges' lunch-room. Anyone who knew Bill will never forget him or his two beautiful daughters, Jennie and May.

"Later, we had K-1 class power on this job and the biggest train to get over Hanover hill was 16 cars of ice. Still later the Bantam ice-house burned down. Electric refrigerators were coming into popular use anyhow, so away went the ice business."

A book entitled *Life in Danbury,* by James Bailey, known as "the Danbury News Man," says the road originally had 208 curves in its 32 miles.

"I think," comments Mr. Blakeslee, "there were about the same number on the Naugatuck Road between Waterville and Winsted."

Our correspondent recalls a snowy afternoon in January, 1925, when he was pulling local freight with engine 392. North of New Preston a crash caused him to stop. He and the fireman, Frank Collins, found about a third of the left main tire gone, the rest being wedged crosswise of the engine in front of the firebox. He walked a quarter-mile through the falling snow to New Preston station and told a stranger there he was looking for a big bar to pry out a broken tire. The man said to his son:

"Bill, you go up to the house and get that big bar. It's in the wood-shed. If it hain't there, it's leanin' up again' the pig-pen, and be quick!"

Bill came back with the bar in nothing flat and, with help from his father, pried the tire out from under the engine. Blakeslee then pulled down the main to let 1504, the passenger train, through the siding. While they were waiting there, the good-natured stranger invited all five members of the freight crew into his home for what he called "a little lunch" but which proved to be as sumptuous as a Thanksgiving dinner. The railroaders not only appreciated the meal but were glad to get in out of the cold and snow. The man refused money, saying:

"I tell yer what I'd kinder like to do, take a ride on the engine to Litchfield some day."

Later, he did take such a ride. "That," continues Mr. Blakeslee, "was only one of the many pleasant things that happened on the old Shepaug, Litchfield & Northern. Of course, we had many a hard trip,

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too. My best friend, Paul MacDonald, brother-in-law to two of my firemen, John and Frank Collins, was killed in a wreck at Cornwall Bridge on June 13, 1924. Another famous railroading family, the Callahans of Roxbury, boasted nine brothers, who formed a baseball team that was locally famous. Most of them worked at some time on the Shepaug."

* * *

HOMESICK is the word used by Edwin Jones, Wheaton College, Wheaton, Ill., to express his reaction to Richard Neuberger's article on the British Columbia Electric in our March issue. "I was born and raised in Montreal," he writes, "but while serving with the Royal Canadian Air Force and stationed at Abbotsford, B.C., I met the girl who is now my wife. The BCE carried us back from our honeymoon spot at Cultus Lake, near Chilliwack, last summer.

"Neuberger says 'the Chilliwack Division closely parallels the Great Northern,' and the accompanying map shows a GN line extending from tidewater through Abbotsford to the U.S. boundary at Huntingdon. This line is now abandoned. The airport where I took flight training was located near the old right-of-way. I often walked across it, the old crossties still being visible in many places. From the air I followed the entire course of the line, which can be seen plainly.

"The Fraser Valley is one of the most beautiful scenic spots I have yet seen. Much of the run over the Chilliwack Division is within sight of majestic, snow-crowned Mt. Baker, 10,750 feet high. The vistas of wooded slopes and prosperous dairy farms from train windows are very pleasant."

* * *

DEER in large numbers were killed in past years by New York Central trains running between Newberry Jct., Clearfield and Cherry Tree, Pa. The reason for this slaughter may surprise you. Two NYC men, Dan F. Cassidy and Ford Johnson, looking into the matter, found that many freight trains included refrigerator cars which kept dropping salt

Courtesy Atlantic Coast Line

Working nights and Sundays only, Draftsman J. W. Hightower turned out this all-wood replica of AC&F's new 100-mph express-reefers in six months. Scale is 3/8-inches to the foot

brine out of the ice bunkers along the tracks and ties. Deer crave salt, especially in spring and summer, but extremely little salt is obtainable in the wooded areas. So the animals came out of the woods at night, licked the brine along the tracks, were blinded by locomotive headlights and were killed.

Cassidy and Johnson induced a Clearfield club, of which they are members, to have an airplane drop 50-pound salt blocks in the adjacent hills above the tracks. As a result, the number of deer reported killed by trains in that region dropped from 98 in 1946 to 10 in '47. Cassidy is a signal maintainer; Johnson, a railroad chauffeur.

* * *

LORE of America's Old West is wanted by George Fronval, 82 rue La Fontaine, Paris XVI, France, who is writing a book on the subject for French teenagers and is particularly interested in dramatic exciting events on early Western American railroads, the outlaws, peace officers, Indian raids, buffalo hunts, such episodes as the Santa Fe-D&RG "Canyon War." He cannot correspond with anyone except in the French language. He

Photo from Jack Whitmeyer, 3450 Russell St., Riverside, Calif.

Atlantic-type 1468 is turning forty—she was a balanced compound when Baldwin released her in 1909—but still pinch-hits for Santa Fe's gas-electric M-180 at the head-end of the San Bernardino local

does have facilities for getting English-language material translated, but asks that all written or printed English-language items sent to him be limited to the subject of his book.

* * *

A NEW contender for the title of "youngest person interested in *Railroad Magazine*" is Michael J. Kelley, age four, 976 Garfield St., Denver, Colo., nephew of James Crump, vice president, Switchmen's Union of North America, 805 Clinton Springs Ave., Cincinnati 29, O. His father, William is an HO-gage fan, with a model layout in his home. Mike has looked through every copy of *Railroad Magazine* for the past year and boasts that he rode in a locomotive cab at the age of three.

Another challenger is Daniel Fromm who started looking *Railroad Magazine* over at the age of two and a half years and who is now four years, three months old. His dad works at the East Pittsburgh Plant of Westinghouse Electric Corporation.

* * *

FATHER-SON engine crews are not rare on the Southern Pacific's Western Division, nor is it unusual for a fireman to "toss the diamonds" for father and son engineers, according to A. J. Williams, SP fireman, 5608 Ocean View Drive, Oakland, Calif.

"One such combination was the Stines," he continues. "I never fired for Tom Stine, now deceased, but have for both his sons. Jesse is a Sacramento Division engineer working out of Oakland on the Gerber passenger pool, and George is a local freight runner. We also have the Noble family: Frank, Sr., on the *San Joaquin Daylight;* Frank, Jr., engineer's extra list, and Clarence, now back firing. I have often fired for both Franks. Also for Dan Sullivan, *City of San Francisco* relief engineer, and his son, Will G., extra list.

"Several runners have engineer sons now firing: E. L. Collyer, son E. G., both on local freight; L. S. Brearly, Sr., son L. S., Jr., both on a yard goat, as are Al Graves, Sr. and Jr., while Merle J. Maley is assigned to the pool and his son is cut off the board.

We had ourselves a big laugh during World War II when all engineers were subject to call as firemen; many's the time a senior engineer had to wield the shovel for a junior."

Courtesy Southern Railway System

Further proof that railroading catches 'em young is this photo of a nursery school group at the Alexandria, Va., shops. More recently, five of radio's "Quiz Kids" solemnly studied a Southern Diesel enroute between Alexandria and Atlanta, Ga.

COLONIAL SLEEPERS are wooden 12-wheel jobs with very plain interiors and with wooden (sometimes concrete) uncarpeted floors, reports W. J. Larner, 234 Polson Ave., Winnipeg, Canada.

They are usually illuminated by gas and the seats, leather-padded in rectangular-shaped sections, are absolutely springless and about as comfortable as a hard wooden bench.

"At one end, in an alcove opposite a tiny washroom," he continues, "is a common kitchen-type coal and wood stove. Even for short runs, an ancient day-coach is preferred to the colonial sleeper. The Canadian National has a goodly number of these sleepers at Winnipeg for use on day excursions. Some still carry the original lettering ICRR (Inter-Colonial Railroad)."

* * *

CENTRAL AMERICA. "Locomotives of the Panama Railroad" (March '48) prompted H. C. Neville, Box 405, Ancon, Canal Zone, to write: "I have a photo, taken in 1909, of one of the 100-series 2-6-4 tankers originally built for Russia's 6-foot-gage but used on the Panama road of that gage, adapted from the French era. This picture shows the 101 in service at Mindi Cut, coupled to a train of steel dump-cars, just in front of the water tank. Engineer Fred Skinner is standing in the somewhat elevated gangway with the writer as conductor on the running board. The colored fireman stands on top of one of the side tanks carried on each running board.

"Mr. Skinner and I went to Mt. Hope and took over five 100-class engines from the Panama road, handling them all at one time as a train to Gatun for construction service. While we were at Mt. Hope, Trainmaster Blunt was holding an investigation into the head-on collision of two small yard goats which had staged a cornfield meet in broad daylight on straight track in Mt. Hope yard, with nothing to obscure the vision of the yard crews! It seems that each of the two men running those engines had assumed he had rights over the opposing engine, until it was too late to stop."

Our correspondent adds that the 100-series engines were used in passenger, freight and yard service on the Panama road, but that since engine and tank were all of one frame, which made them very rigid, they were likely to get on the ties and were troublesome to rerail.

* * *

ANSWERING a recent query about Number 1468, one of the last Atlantic types on the Santa Fe's Los Angeles Division, Paul W. Tilley, Santa Fe mudhop, 10109 S. Stanford Ave., Los Angeles 2, Calif., laments the fact that she is about to be scrapped. "Her side-rods are off and all blocked up," he writes. "For a long time she was used on the San Bernardino local, but was replaced by the 1339, a Pacific type, and took over the job of operating a heating plant. The only other Pacific type running out of L. A. is the 3443, on the San Diego steam run."

CANADIAN National timetables show a series of town names that may surprise many readers, reports F. H. A. Collins, 6 Wateredge Ave., Montreal 33, Canada. The main transcontinental line westward from Winnipeg has three complete alphabets, more or less intact but broken here and there by towns previously established or by recent changes. Further west are the remains of a fourth and fifth alphabet and even the beginning of a sixth!

The first alphabetized list of stations begins 5½ miles west of Portage la Prairie, Manitoba, as follows: Arona, Bloom, Caye, Deer, Exira, Firdale, Gregg, Harte, Ingelow, Justice, Brandon North, Knox, Levine, Rivers, Myra, Norman, Oakner, Pope, Quadra, Miniota, Uno, Treat, Wattsview, Lazare, Victor, Welby, Spy Hill, Gerald, Yarbo, Zeneta.

The second series starts immediately after Zeneta, running from Atwater to Zelma. Right after that comes the third series, Allan to Zumbro, followed without a gap by the fourth, which runs from Artland to Uncas.

The stop after Uncas launches the fifth series, Ardrossan to Yates (with many breaks in alphabetical continuity). Then comes Edson, followed by Ansell and Bickerdike, after which the alphabetizers must have got discouraged and quit.

* * *

BLIND persons, as a rule, have keener perceptions than persons who can see. This is true in the case of Jack George, a blind ex-Marine, who lost his sight on Guam in 1944. Jack was sitting at home at 36 Bridge St., Beaver Falls, Pa., the other night with his father, Griffith W. George, and listening intently to a fast eastbound Pennsy train thundering over the Beaver River bridge a block away. Instead of the usual click of wheels over rail-joints Jack heard an alarming thumpety-thump.

"Dad," he exclaimed, "there's something wrong on the railroad, maybe a broken rail! We'd better investigate."

The two men hurried out into the night with a flashlight. The father found a foot-long break in the rail. Later, he said:

"That break could have wrecked any train. It probably came just as the last car of the express went over. Another eastbound express was due any minute. I stationed Jack in such a position on the bridge that no train could hit him, handed him two flashlights, and told him to wave them violently if he heard a train coming. Then I ran home as fast as I could and telephoned the Pennsy dispatcher."

The dispatcher flashed a warning to nearby trains, gandy dancers repaired the break, and railroaders began calling at the George home to congratulate the hero and his quick-witted father. This incident comes from Robert K. Block, 1445 Tieman Ave., Pittsburgh 12, Pa.

* * *

INDIA is represented this month by a letter from B. C. Adams, Carron Post Office, Jalpaiguri, North Bengal, who

KENT RAZOR BLADES

8 Blades Per Pack

10¢

A Shaver Wise Economy Bent Gets More Shaves By Buying Kent

If not Available at Your Dealers Mail 10¢ for 1 pk.—$1 for 12 pks.

CUPPLES COMPANY
ST. LOUIS 2, MO.

comments on an item in our Dec. '47 *On the Spot* stating, "The literary taste of the London & North Eastern's chief namer of locomotives is obvious from the fact that some 60 of the company's engines bear the names of characters from Sir Walter Scott's novels."

Mr. Adams writes: "This is not quite correct. The practice of naming locomotives after characters and places in the Waverly novels orginated with the North British Ry. of Scotland, which became part of the LNER after the 1923 amalgamation.

This railway has had three types of express passenger engines which bore names. First group included the famous Atlantics, named for towns and districts through which the line ran. Second group, the 4-4-0 "Glens," which largely served the West Highland branch, were named for glens in that area. Third group consisted of "Scotts," with literary names.

"As old LNER engines were withdrawn and broken up, their names have been given to new ones. Indeed, a couple of new names have been added to keep alive the tradition of the railway which served the Scott country."

During the war Mr. Adams was commanding officer of a railway construction company in the Western Desert. One of the lines under his charge, the 95-cm.-gage Benghazi, Barce & Soluk, had been badly damaged, especially its rolling stock.

"At the time I took over," he continues, "it had two locomotives, an Italian Diesel-electric which had been built by cannibalizing several others and an aged 2-6-0 tanker which the operating company had rebuilt from scrap and named *Genie Madden* after the wife of a company officer.

"A train carrying military stores used to run from Benghazi to Soluk one day and to Barce the next day, visiting each place thrice weekly. Toward the end of 1944 three passenger coaches, rescued from the bombed-out yard, were coupled on behind the cars of military stores to

Photo from Rev. George W. Wickersham, 535 Haws Ave., Norristown, Pa.

Bringing the coal to Chester, the Long Valley Branch daily local thunders onto Jersey Central's single-track bridge over the Raritan. Original timber bridge was Howe design, 1876; present wrought-iron lattice structure rests on original abutments. Number 472, like most of CofNJ's famous twelve-wheelers, was retired last year

Photo from Press Association, Inc.

Marines flew cover for this special train evacuating U. S. Army personnel and their families from Peiping area in war-torn China. Flyers had a birds'-eye view of blown bridges and damaged rails, warned trainmen over the 100 miles to refuge in Tangku

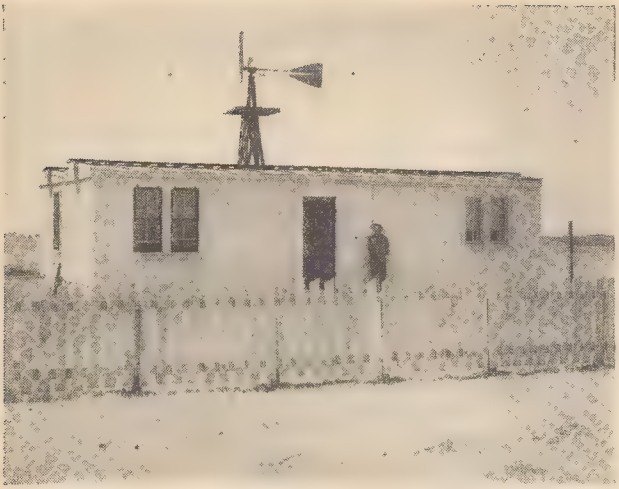
facilitate the movement of the local population. Behind these coaches were three open freight cars for livestock.

"One day the train left for Barce and had climbed the three miles of 1 in 80 gradient out of Benghazi when it halted on the main for the engine to run into an oil depot and bring out a tanker for Barce. The train was left on the main line. Off went the locomotive around a curve of about five degrees and almost a full semicircle. Suddenly the engine crew noticed that the train, which should have been standing on the main line, had started downhill for Benghazi with more than 100 passengers in each coach.

"The locomotive was rushed out of the siding and gave chase down the grade, catching up with the train about a mile later. The real trouble was to stop the train. It was not possible to couple up; the buffers on these railways are in the center and are smooth, slightly curved, and about 18 inches long. Coupling chains are right underneath, completely inaccessible at such a time. However, the switchmen, Diesel mechanics and others who were riding the locomotive clambered over the freight cars and managed to set the brakes. By that time the whole outfit had entered Benghazi yard. If the runaways had traveled a few hundred yards further the whole train would have gone over the harbor edge into the sea, as there was no dead end on the track to which the points were set."

Mr. Adams, who was then a major, tells us that passengers were forbidden to take livestock into their coach compartments but had to put the animals into freight cars in the rear and pay accordingly.

"One day I was standing at Benghazi station with some operating officers," he recalls, "when we saw an Arab woman come out of a coach carrying a small goat. My companion asked the conductor why the order had been disobeyed.



Two boxcars meant solution to the housing problem for a Texas farmer. Total cost, counting labor, $430. Barns and chicken houses cost $900 more. Rabbit-, chicken-, and dog-proof fence was cut from willow and nailed to scrap lumber. Afterthought, dictated by its resemblance to railroad signalling equipment, was firm anchoring of windmill to roof of the four-room house. You don't care for the design? Well, just think what finally came of Pullman's experiments with a boxcar!

Photo from J. K. Arthur, 611 W. 113 St., N. Y. C.

The conductor replied: 'When she got on at Sidi Maius, I observed she was rather bulky but thought nothing of it. She must have had the goat tied with its legs around her under her gown.' "

* * *

WANTED by Norman Dartnell, 102 Bole St., Chilliwack, B. C., Canada; figures telling the size and capacity of each important railway yard in Canada, including the Canadian Pacific yard at Winnipeg, which he believes is the world's largest. Mr. Dartnell reports that the CPR is going to build at Nanaimo, Vancouver Island, B.C., a combined terminal for land, sea and air use. This will be a major development, with facilities for trains, planes, buses and ships, including a new modern passenger station.

* * *

BACK in railway service after a spell with the Royal Navy, Isaac Kuphem writes from his home at 206 Greenfield Estate, Tunstall, Stoke on Trent, England: "I was unable to get an operating job but was put in the erecting shop of Crew Locomotive Works to wipe and paint engines. The work is tedious, but at least it's railroading, which means a lot to me. Several specimens of early railway history are to be seen at Crewe, including the 9-4-2 *Lion* of the Liverpool & Manchester Ry. the *Cornwall*, a 2-2-2, built at Crewe in 1844, and a full-scale working model of Stephenson's *Rocket*.

"Class G-1 freight engines, 0-8-0 wheel arrangement, first appeared in 1912 but some of them are still doing useful work on the British Railways' Midland Division. Of even more ancient vintage are the 0-6-0 freight engines built in 1880, now in yard service. The other day I saw the British Railways' one and only 'turbomotive' hauling the Euston-Liverpool train. She seemed to be running very quietly as compared with the reciprocating type of engine. Although she is in the nature of an experiment I understand she is performing quite satisfactorily."

* * *

BOXCAR DAY is celebrated each Labor Day by a town of 3000 population, Tracy, Minn., a Chicago & North Western division point. The citizens agree that the common boxcar is a major factor in the town's existence. So for one day a year that humble conveyance of the nation's wealth is feted and acclaimed.

* * *

DYNAMITE, 50,000 pounds of it carried in two steel boxcars, added to the hazard of a recent freight-train derailment near Pinedene on the Pretoria line of the South African Government Railways, report David Parsons, 6 33rd St., Malvern, Johannesburg, E. 9, South Africa, in a letter relayed to us by Walter

Thayer, Box 1588, Chelan, Wash. The train was pulled by two class 1-E electrics.

Both the crew members and railway officials refused to go near the wreck until experts on explosives had examined the dynamite and removed it.

* * *

STRANGEST village in America is said to be "Boxville," alongside a Union Pacific spur track in Yakima, Wash. Here stand row upon row of tall and long buildings, roofed in such a way as to suggest dwellings. They do not provide shelter for a single inhabitant, and the "houses" consist of huge stacks of empty apple boxes ready for use in harvesting and shipping the multi-million-dollar apple crop of Washington State.

* * *

WATER-SCOOPERS. A retired chief train dispatcher of the Maine Central Treat, 31 Hutchinson St., South Portland, Me., looks back over the years and finds them clustered with rich memories.

"Among the recollections of my boyhood days," he writes, "one that has never become dimmed has to do with the mornings when I walked around engine 46 of the Farmington branch passenger train, at 'Dad' Foster's side, while he oiled here and there, and touched with the backs of his fingers the main connections and the hub centers of the drivers and ponies to determine if they were too warm. Dad has long since gone; and the 46, renumbered 78, was scrapped years ago; but the spirit of each remains with me."

Mr. Treat tells us that few railroaders now in service know that 60 years ago the Maine Central operated some non-stop passenger trains between Portland and Bangor, a 135-mile link in the 300 miles between Boston and the famous Bar Harbor. The Portland-Bangor line included then, as now, two routes for about 70 miles, one known as the Back Road, the other the Lower Road. Grades were such that eastward trains generally were run via the Back Road, westward trains via the Lower Road.

From Portland to Bangor were six grades of 1 percent or less, each several miles long, and in the opposite direction we had 7 similar grades, one as much as 4/5 percent from Bangor to a point about 3 miles west, for which no "run" could be made. Track pans were located at Mine Meadow, 40 miles from Portland on the Back Road; at Dresden, 47 miles from Portland on the Lower Road, and at Burnham, 95 miles from Portland and 15 miles from Waterville where the two roads converged into one through to Bangor.

Three engines, 22, 34 and 42, were equipped with water scoops. Oil-cups containing curled hair were installed on eccentrics, links and hangers, while oil-pipes were run from inside the cab to eccentrics, driving boxes and pony journals. These engines were eight-wheelers. Each had 17x24-inch cylinders, 5 feet 8 inch driving wheels; and Stephenson valve

A CLUE FOR YOU

IF it's mystery and adventure you want in your radio listening fare, just tune to these programs.

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Lon Clark as radio's Nick Carter

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Sundays, 7:00 p.m., EDT.
Conan Doyle's stories dramatized

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Mondays, 8:00 p.m., EDT.
Romance mixed with murder

MYSTERIOUS TRAVELLER
Tuesdays, 8:00 p.m., EDT.
Eerie and supernatural tales

GREGORY HOOD
Tuesdays, 9:30 p.m., EDT.
Adventures of businessman sleuth

RACKET SMASHERS
Wednesdays, 9:30 p.m., EDT.
Experts counteract crime

Check local newspaper program listings against possible variations in broadcast schedules.

MUTUAL BROADCASTING SYSTEM, INC.

gear. Number 22 was built by Rhode Island Locomotive Works in 1885, and 34 and 42 by the Portland Co. in '87 and '88 respectively. Each weighed approximately 47 tons plus tenders of nearly 33 tons carrying 3500 gallons of water and 6 tons of coal.

The Boston & Maine and Maine Central changed crews and power about a half-mile before arriving at Portland depot to avoid a station stop. Because the law required that a "know-nothing" stop be made at Danville Jct., where the MeC crossed the Grand Trunk at grade, pressure was brought to bear for a traffic stop there, to benefit a popular hotel, Poland Spring House. Ultimately this stop was agreed upon. The new train service began June 3, 1888, and ended that September 10th; it was not again operated. After a few years the track pans were removed.

"Engine 42," Mr. Treat continues, "was about the sweetest little iron horse you ever set eyes on. Her reverse-lever quadrant was finely notched for about a foot each side of center, while her valve action was so perfectly adjusted that she would maintain speed of 50 to 60 miles per hour on the flats with a 4-car train, when hooked up to the notch next to center. As compared with more recent power, her performance seems superb. Her tractive effort was a mere 15,000.

"From the time when I was a small boy until I became a train dispatcher, our morning and afternoon Farmington branch passenger train was hauled regularly by the 46, a twin to the 42 but not equipped for long-distance running. This train consisted of combine, smoker and coach. Through all those years the engineman was Everett ("Dad)" Foster, a small, hunch-shouldered, sharp-eyed man with grizzled mustache and goatee.

"Many a winter morning I saw this train with a wedge plow on the nose and flange scraper on the rear, breaking out the branch after a tough snowstorm which had left a foot on level ground, with drifts up to 6 feet; and I never knew a day when Dad failed to get through. As for his ability to get out of town in warm weather, consider the fact that whenever the afternoon train was late, due to connections from the Back Road main line, Dad would invariably use only 30 minutes from a start at Curtis Corner station to a stop at Livermore Falls (where I was learning telegraphy and station work), a distance of 16 miles but with four regular station stops to make.

"In 1900 the Maine Central classified and renumbered its 161 locomotives: 22 became 56, 34 became 71, 42 became 73, and 46 became 78. Thus, it seemed to me, they lost much of their old personality. However, it was a proper change to make, in conformance with the practice of giving each new locomotive the number of an old one that had been scrapped."

* * *

SEVENTY CARS were left behind the other day, when four crew members rode a Diesel engine from Oroville to Marysville, Calif., without knowing of their loss, according to an item in *The Oroville Mercury* sent to us by retired boomer, James V. Montgomery, Oroville, Calif.

This is what happened: A long Western Pacific freight train had been made up in the yard south of Oroville. The two-unit Diesel backed in to be coupled. This operation presumably completed, the two brakemen boarded the locomotive to ride with the engineer and fireman, as was their custom. Then, it seems, the engine pulled out of the yard onto the main track and ran all the way to Marysville before the men became aware that the 70 freight cars were still at Oroville.

Inspection of the airbrake at Marysville revealed that the angle cock which should have set the brakes was closed, not open as it should have been. Apparently the airhoses had been coupled to the first car at Oroville but had not been set in place nor had the air valve been opened that would have led to brakes on all the cars.

It was explained that if the locomotive air valve had been opened properly the brakes would have set automatically when

Harris-Ewing Photographic News Service

Medal for government interest in Sixth Pan-American Railway Congress reaches President Truman via William F. Faricy, A.A.R. head at right. What interest was that, eh, Mister Whitney and Mister Johnson?

the airhoses were pulled apart. Unfamiliarity with Diesel engine power may have led the crew to believe they were pulling the freight cars when actually nothing was behind them. One man pointed out that steam locomotive power was applicable instantly, whereas Diesel generators required a few seconds before full power could be applied.

The night was quite dark, and it might have been difficult for the crew to see from the head engine past the second unit to where the cars should have been. As for the conductor, the boss of the train, he was left in the yard, doubtless with a very red face, when the engine pulled out.

* * *

TOM ROONEY, author of "A Taste of Railroading" in our May issue has been doing quite well with fact-detective stories recently. Author Rooney got his start with *Railroad* back in 1931 when Freeman H. Hubbard bought a poem, "Down at the St. Paul Station," which got a reprint in *Literary Digest*. But to go back to those fact-detective tales and how well Rooney is doing with them—here's a little reprint from the *Seattle Times* that proves there's often many a slip between the author and the check. Dated November 13th, from San Francisco, the clipping reads:

"Tom Rooney, publicist, received a nice letter from a New York detective magazine saying the editors liked his little story, 'The Maiden and the Fiends,' and here was a check for $50.

"Rooney was happy—but mystified. He never had written a short story. A reporter mentioned it in his column and—Tom Rooney, writer, appeared.

"Several months ago Author Rooney visited Chicago, Milwaukee and St. Paul to gather data on the old Zinda murder case. 'The Maiden and the Fiends' resulted. Ever since he has been wondering what the publisher was going to do with it.

"Tom Rooney, author, of 607 Grove St. visited Tom Rooney, publicist, of 67 Grove St., and picked up the $150.

* * *

SONGS AMERICA LOVES, by the 1380 Railroad Chorus was a feature of the finals of the Sixth Annual Tournament of Orators on April 27th at the Academy of Music in New York City. James Allen Dash directed the all-male glee club. "Workin' on de Railroad" led off a group of six selections and was well received; but unfortunately, to at least one person in the audience, the rail flavor was soon lost in a medley of sentimental "favorites" such as "The Lost Chord"—which we wish could be lost for good. Your editor listened in vain for "Casey Jones," "The Wreck of Old Ninety-Seven," and "The Big Rock Candy Mountains." The boys looked as if they would have preferred 'em, too.

* * *

EVERT HUMPHERYS, Western Pacific mudhop at Portola, Calif., has at least two distinctions. Besides being a

bishop of the Mormon (Latter Day Saints) Church, he owns the 250,000th U. S. Savings Bond issued by his road. Humpherys, born in Idaho 40 years ago, has been railroading since September 2, 1929.

Does anyone know of another bishop employed by a railroad company?

* * *

REMARKABLE in view of the many trains and maneuvers involved is a Southern Pacific train order we have just received from Harry Bedwell, boomer dispatcher, operator and author of *The Boomer*. This copy was issued by a dispatcher on the western end of the Los Angeles Division to Condr. W. M. Golson of Number 72, a local passenger train enroute from San Francisco to Los Angeles in wartime, and dated at Niland, February 17, 1943.

The flimsy, addressed to C&E (conductor and engineer) No. 832, Eng. 4386, No. 3, reads as follows: "Extra 5002 west take siding meet third 824 at Mortmar and No. 826 at Thermal and has right over third 2 Bertram to Thermal. No. 823 meet first 824 at Mundo second 824 at Frink hold main track meet third 824 at Bertram and has right over second 2 and No. 826 Niland to Mortmar.

"Eng. 4386 run extra Niland to Indio hold main track meet second 824 at Wister third 824 at Bertram has right over third 2 Niland to Durmid and right over No. 826 to west switch Salton.

"First and second 824 and third 2 have right over No. 3 Indio to Niland.

"Third 824 has right over No. 3 Thermal to Bertram.

"No. 826 has right over No. 3 Indio to Salton.

"Second and third class trains and westward extra trains ahead of first class trains until otherwise instructed or overtaken."

Another unusual train order comes to us from C. E. Woods, Seneca, Mo., a Frisco Lines flimsy dated February 19, 1948, and addressed to C&E eastward trains at Afton, Mo. It reads as follows:

"Account young mules penned Neosho do not use blow off cocks or open cylinder cocks passing or standing vicinity stock pens."

* * *

"PEOPLE who grow bored on trains, who are forced to resort to the horrible anodyne of gin-rummy, have no imagination, no spirit, no sense of time and space and the logistics of living," writes Sydney J. Harris in the *Chicago Daily News*. "They are locked like oysters in their tight little souls.

"After the diner is closed, after the club-car has been locked, I love to lie in my berth, with the lights off and the shade up, and watch the country rush by. I can do this for hours—and it is only at such times that you get the feel of America.

"I love the self-contained idea of a train, which is almost a living organism, and I can understand why railroad folks are fanatically loyal to their calling. There is something about a locomotive chugging uphill that is wonderful in a way that nothing else is."

* * *

LAST STOP is the Reader's Choice Coupon *(page 145)*, which guides your editorial crew in selecting material for future issues of *Railroad Magazine*.

Some readers use the coupon. Others prefer not to clip the magazine; they send home-made coupons, postcards or letters. Regardless of how votes are written, all count the some. Results of balloting on the June issue show as follows:

1. Temiscouta, *Runey*
2. Railroad Scouts, *Dellinger*
3. Turbulent North Arkansas, *Schick*
4. Manhattan's Early R.P.O. Lines, *Connolly*
5. Luck of the Irish, *McGuire*
6. In the Days of the Old Eighty-Five, *Hinds*
7. Recollections, *Wright*
8. Light of the Lantern
9. On the Spot
10. Out of Car Shop

Most popular photos: pages 52-53, 59

Photo from George W. Weingart, 3002 Ursuline Ave., New Orleans

Equipment like this went on a fantrip in 1888; and at least one shutterbug got the result you see above. At Chatawa, Miss., in Illinois Central territory

Railroad Camera Club

ITEMS sent to the *Switch List* and *Model Trading Post* are published free, in good faith, but without guarantee. Write plainly and keep 'em short. Print name and complete address.

Because of time needed to edit, print and distribute this magazine, all material should reach the Editor eight weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by latest Reader's Choice coupon (clipped from page 145 or home-made).

Due to scarcity of space, we prefer that no reader be listed here oftener than once in three months.

Use these abbreviations: *pix*, photos; *cond.*, condition; *ea.*, each; *elec.*, electric; *env.*, envelope; *eqpmt.*, equipment; *esp.*, especially; *info.*, information; *n.g.*, narrow-gage, *negs.*, negatives; *p.c.*, postcard; *pref.*, preferably; *tr.*, train.

Switch List

FRED B. ABELE, 98 N. Pine Ave., Albany 3, N. Y., offers size 620 pix D&H, NYC, FJ&G, S&S, other rds. this vicinity; list, sample, 10c.

(R) L. G. ACKERLY, 404 Newport News Ave., Hampton, Va., has *Railroad Magazine* '30 to present; *Model Railroader, Model Craftsman, Miniature RR., Lionel, Model Builder, Model Ry. News* (British), *Modelmaker, Model Engineer* (British), most compl. yrs., good cond., few covers missing. Enclose p. c. for info.

(R) V. B. ADAM, 635 S. McKinley Ave., Kankakee, Ill., will sell *Railroad Magazine*, July '43 to Dec. '47, none clipped, with covers, good cond. $5. exp. collect.

ALLEN R. BAIRD, 259 N. 10th, Colton, Calif., has all rosters which have appeared in *Railroad Magazine*, many others. No list. State your wants.

E. W. BARLOW, 1400 Robson St., Vancouver, B. C., Canada, wants emp. tts., all rds. Has many to trade incl. CPR., CNR. Will send CNR, B. C. Dist. emp. tt. to anyone sending emp. tt. SP, Frisco, MoP, Santa Fe, MKT, any short line rd.

EMILE T. BRUCE, Loretto, Va., will send 4 good negs. oldtime locos for $1. Suitable to make prints for exch.

(R) ROY F. BLACKBURN, Box 965, Grand Junction, Colo., is accepting bids on compl. set *Railroad Magazine*, Dec. '29 to date, all good cond. Also has compl. set *Trains*. Cash.

JAMES E. BOESHAAR, 2004 N. 37th St., Milwaukee 8, Wis., has 35 mm. color slides Milw. Rd. Diesels, Milw. City cars, interurbans, 35c ea. No list.

FRED BROWNELL, 6126 S. Ingleside Ave., Chicago 37, Ill., will sell 500 Builders pix for best offer.

ROBT. G. BURGER, Box 255, Burlingame, Calif., is disposing of collec. tr. ords. 85 diff rds. Some with clearance; also 11 emp. tts., '36 to '39; *Off Guide* Apr. '36, Galveston, Houston & Henderson rulebook '09. List for stamp. Accepts best cash offer for lot.

(*) GEO. J. CAPDEVIELLE, 5331 Bond St., Oakland 1, Calif., wants good clear negs., size 116 Ill. Term. RR. eqpmt., C&O turbine-electric 500. Penn. turbine, 2-10-4s.

(*) JOSEPH CARTA, 1020½ 5th Ave., Huntington, W. Va., will sell *Interurbans* '47, *Trolley Sparks* '47, *Era Headlights* '46 to '47, *CERA*, 70 issues *Electric Ry.*, many other juice mags. Write.

(*) CHAS. G. CHALOUX, 677 E. 231st St., Bronx 66, New York, N. Y., wants to buy pix, negs. the Third Ave. Ry. System. Will buy list.

LOUIS CHARTERS, 20 Hillwood Rd., 3rd Floor, Kowloon, Hong Kong, South China, *loco. fireman on British RR.*, would like pix Am. steam locos. Write price.

(R) JAN CLAYTON, 710 Washington St., Wilmington, Del., will sell *Railroad Magazine*, Mar. '08; Jan., Nov. '10; Feb-Apr., July, Sept., Dec. '12; Jan. '13; Jan., Apr., Dec. '14; Jan.-Mar., May, Aug., Oct., Dec. '15; Feb.-May '16; Jan., Apr., July-Sept., Dec. '17; Mar., Oct., Nov. '18.

BILL COO, Box 202, Copper Cliff, Ontario, Canada, sells all size pix Sudbury-Copper Cliff Suburban Electric, including colored. Send for list. Size 620 pix, 13 for 75c.

RAYMOND F. CORLEY, 45 Blantyre Ave., Toronto 13, Ont., Canada, wants to hear from anyone able to supply data or pix PCC cars on any system.

W. B. CRAM, 70 Grove St., Augusta, Me., will buy *Trains*, good cond., Dec. '40; Jan.-Mar., May-June '41.

MILTON A. DAVIS, 4228 Berger Ave., Baltimore 6, Md., wants size 616 or larger negs. 4-4-0s, esp. C&IM, MKT, SP; 4-4-2s, esp. CNJ, Erie, C&EI, Ann Arbor, SSW; will buy or has few PRR, Md. & Pa. 4-4-0, B&O, PRR 4-4-2 negs., size 616 to trade.

JOAN DERR, 401 Ohio Ave., Wilmington 126, Del., wants info. concerning commuting Walbash tr. from Centrailia, Mo. to Columbia, Mo. Will also exch. tokens.

(*) MAURICE DeVALLIERE, 112 Woodland Ave. (Sealey), Clarksburg, W. Va., wants pix City Lines of W. Va. elec. cars on Clarksburg, Fairmont or Weston lines. Pays cash.

(R) LLOYD DOLBY, 1460 E. Philadelphia, Detroit 11, Mich., wants back issue *Grand Trunk Western*, Mar. 92 non-revenue trip. Wants *Railroad Magazine;* has issues Feb. Jan. '48, Oct. '47, good cond.

F. L. DONNENWORTH, 3324 Clydesdale St., New Westminster, B. C., Canada, wants *Trains*. State price.

(*) ROBT. L. DRAKE, 7 Calvin Rd., Jamaica Plain, Mass., will trade 4 San Francisco Municipal Ry., 1 Calif. Street Cable trsf. for 5 your city, clean cond.

(R) G. R. DRIGGERS, 7405 Alycia Ave., Lakeside, Richmond 22, Va., has *Railroad Magazines* '36 to date to trade for size 116, 616 loco pix, other books, *Trains;* also 1 as size 116, 616 pix to trade, passes, tts., St. car passes, trsfs. Wants same size SAL steam loco pix; no Diesel or action; will pay 5c ea. Send list.

PAUL B. DUNN, 912 Arch St., Zanesville, O., buys negs., size 616, pref. B&O E-24, E-24a, J-1, N-1 classes; PRR h-6sb class; all classes NYC 2-8-0s, also others. Has few OR&W pix to sell or trade. Write.

(R) H. RICHARD EDSALL, 25 W. 2nd St., Sussex, N. J., will sell 140 issues *Railroad Magazine*, 13c ea., good cond. C.O.D. only; will sell size 616 action pix AT&F, CRI&P, LV, L&HR, Erie, Frisco, KCS, MP, IC, L&NE, D&H, T&P CB&Q, DL&W, others, 4c ea.

DAVID ELL, 42 Messina Pl., Dayton 4, O., wants snapshot new eng. C&O RR. is using on the new *Chessie.*

(*) LOUIS EURINGER, 2034 N. 35th St., Milwaukee 8, Wis., is selling all C&NW, CMStP&P negs. Has many TMER&T, CNS negs. Pix, 8c ea., 14 for $1 p.p.; size 616. Also has juice emp. tts. List for stamped env.

(R) W. EVANS, Rt. 1, New Richmond, O., will sell back issue *Railroad Magazine* in good cond., Jan. '40 to Apr. '48, $16.

J. HARRY FELDEN, Jr., 3345 Richmond St., Philadelphia 34, Pa., will sell *Model Railroaders*, various issues '36 to '47, write for list. Will trade for *Model Railroader* bound vols. 10, 11, 12; must be good cond.; or sell $30 p.p.

(R) A. D. GARNER, 5525 W. Colfax Ave., Denver 14, Colo., will sell 132 copies *Railroad Magazine* Jan. '34 to Dec. '47 ('38 to '43 compl.); excell. cond. $20 for lot.

JOHN A. GAYDOS, 1437 Gregory St., Chicago 40, Ill., will receive and handle envelopes to have cachets or cancels applied from Chicago Railroad Fair. Up to 5 can be sent; if fewer are issued, remainder will be returned.

O. GRAVES, 100 N. Buena Vista Ave., San Jose, Calif., will sell pix 5x7 SF cable cars, 50c ea.; many historic spots in background.

(*) GORDON HAMILTON, Rt. 1, Box 5, Princeton, W. Va., wants to corres. with juice fans. Wants pix old abdn. lines, esp. interurbans; also elec. traction maps.

(R) W. H. HARRIS, 47 W. Elm St., Stockton, Calif., will sell *Railroad Magazine* '30 on; *Trains* '41 on. Wants *Trains* '40, '41.

PHILIP R. HASTINGS, 22 University Rd., Burlington, Vt., will sell northern New England and southern Quebec pix, mostly trs. in action, some engs., CPR, StJ&LC, B&M, EB&L, p. c. size 15c; 5x7, 30c; 8x10, 50c. List, sample rd.; your choice, 25c.

(R) J. R. HAUER, 3710 Hazel St., Erie, Pa., will sell for best offer for ea. group, *Railroad Magazine* Feb. '34 to Dec. '47, few '34 issues, loose covers, are slightly clipped, other good cond.; compl. file *Trains*, Vol. 1, No. 1 to Oct. '47, excell. cond; *Model Railroader* Jan. '40 to Dec. '47, good cond.

CHARLES V. HESS, 209 S. Cottage Ave., Goshen 4, Ind., is disposing of LaMar Kelley stock p. c. pix, large selection steam rds. 20 for $1, 125 for $5. List your wants.

(R) N. M. HILLIARD, 2320 Lincoln Ave., Apt. 4, Montreal 25, Quebec, Canada, wants *Railroad Magazine*, Sept. '47, good cond.

(*) WM. HORN, 217 Northview Rd., Dayton 9, O., has pix 4x6 NYC trs. on the line between Richmond, Ind., and Springfield, O.; between Franklin, O., and Jackson, Mich. Send for pix price list.

(R) JOHN A. HORTON, 4115 Francis Ave., Cincinnati 5, O., will sell or trade 60 issues *Railroad Magazines, Trains, Model Builder, Model Railroader*, good cond., '41 to '48 misc. copies. First $7 takes all.

GRACE E. JENKINS, Box 57, Swarthmore, Pa., wants histories of Maine shortlines.

IAN M. JOWETT, Station Hotel, Northallerton, Yorks, Eng., wants to swap U. S. steam pix for size 120 British steamers, spec. and excursion. Welcomes corres.

F. G. KARL, 319 Niagara, Sheboygan, Wis., wants to buy or trade for negs. C&NW, size 116, 122. Has negs. C&NW, Soo, Milw.

LOUIS KREWER, Box 695, Closter, N. J., has 25 *Off. RR. Guides* for sale, 50c ea., plus post.; with ea. one purchased, will give emp. tts. or book on rrs.

L. C. LAPP, 211 E. Fulton St., Michigan City, Ind., has plans for model eng. pts. available for printing cost. Live steamers, Diesel.

BOB LAWLER, 409 Cedar St., Muscatine, Ia., will sell tts., tr. ords. or trade for those any other rd. Also has emp. mags.; some RI emp. tts., Rock Island Div., showing new line relocation around Wash., Iowa.

(*) ALEXANDRE LEGARE, 438 duRoi, Quebec, P. Q., Canada, is collecting tramway, bus tkt. fares. Wants to swap with others.

P. H. LEROY, Box 2157, Dallas, Tex., has action pix T&P, AT&SF, MKT, SLSW, p. c. larger. List for stamp.

(R) E. R. LOMBARD, 8641 Baring Cross St., Los Angeles 44, Calif., wants *Railroad Magazines*, Feb.-Apr. '37; Sept., Nov. '38 Mar. '39. Will pay 50c ea.

RUDOLF LOOS, (15) Geschwenda, Thuringia, Ilmenauerstrasse 30, Germany, R. Zone, will sell trans. tokens as the very rare set 45 aluminum Octagonals from Nurnberg, and set 3 Ludwig's ry., first ry. in Germany.

(R) ED MANGAS, Sr., Rt. 1, Box 38, Shelton, Wash., wants *Railroad Magazine*, Jan., Feb. Nov. '47; *Trains*, Oct. '47. Has perf. issues Feb., Mar. '48 Name your own price.

ROBT. McLEOD, 731 S. 28th St., Milwaukee 4, Wis., has pix Gary, Ft. Wayne, Marion, rys. for sale, 7c ea., 15 for $1. List, sample, 10c. Buys, trades, sells good clear size 616 negs. Has few recent emp. tts.

ALDEN E. MILLER, 3212 34th Ave., South, Minneapolis 6, Minn., wants books, historic vols. on State of Wisconsin RR. history. Has C&NW material to exch., sell.

(*) ED MINDEN, 76 Medford Ave., Patchogue, N. Y., wants Brooklyn streetcar roster, pix. Also Lionel

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ANTHONY MONDELLO, 723 E. 212 St. Bronx N. Y. C. sells pix Third Ave El, N.Y.C.; also all Manhattan, Bronx trolley lines; 3½x5, 1Cc ea., 5x7, 20c ea.

(*) EARL MOORE, 3746 Sheffield Ave., Chicago 13, Ill., has new list streetcar, elec. line R. P. O. cars used to carry and cancel mail yrs. ago. 4x6 enlargements; also sells, buys old covers with street, elec. interurban R. P. O. postmarks.

(R) EDWARD A. MORAN, 3629 Oxford Ave., Riverdale, N. Y., will sell *Railroad Magazines* '34 to '48; *Model Builder*; *Model Craftsman*; *Model Rlt., Miniature Railroading*; *Trains*; *Ry. Electrical Engineer*. Send your want list. Also latest copy *Railways* (British) 30c.

(*) ROBT M MORRIS, Elks Club Hotel, 18th St & Dodge St., Omaha, Neb., wants to corres., exch. pix with any Ind. motormen or conductors on interurban lines out of Indianapolis, '12 to '18.

VIRGIL E. PIERCY, Jr., *disabled war veteran*, Rt. 5, Nampa, Idaho, wants C&NW, SP, AT&SF, special agents, and emp. badges prior '35; also wants European emp. badges, tkts., passes, etc.

E. L. PLANT, 3226 E. 26th Ave., Vancouver, B. C., Canada, offers illus. tt. with compl. info. on trips available to railfans, from Vancouver via CPR, CNR, PGE, BCER, etc., 50c. Write for details.

(*) R. W. PFEFFER, 128 Louise St., Topeka, Kan., will sell railroadiana material, SN, MP, PRR, RI, UP, AT&SF, SP, NPR, NYC, assorted trsfs. Match folders SF, RI, CM&SP, MP&SP, pix., p. c., mostly juice; tr. ords., clearance cards, diff. rds. Write for info. or send bid.

(*) RAY PURCELL, 728 S. Maple Ave., Oak Park, Ill., wants pix, info. C&WT Rys. elec. lines.

(*) F. E. REIFSCHNEIDER, Box 774, Orlando, Fla., offers *Toonervilles of Empire State*, 38 pgs. fascinating story sm. N. Y. elec. rys., 35c.

(*) GEO. H. REITZE, Jr., 44 Belmont Ave., Jersey City 4, N. J., will send list rr., elec. line pix, for stamp; list, sample, for dime.

JOSEPH R. RHODEN, Jr., Rm. 1212-A, 1244 N. Dearborn St., Chicago 10, Ill., will buy n. g. pix steam, elec. Diesel, oil, gas, tram. etc., U. S., Foreign.

(*) ROBT. ROSE, 16 Lincoln Ave., Totowa Borough, N. J., will buy good size 616 negs., all rds. Will pay well for C&O, N&W, Va., P&WVa. power; also Milw., GN elec. Enc. sample pix of neg. for sale. Return prints.

(R) JOHN RUSCH, 7124 S. Campbell Ave., Chicago 29, Ill., has *Railroad Magazines* Jan. '32 to Jan. '48 compl., like new, single copies 35c ea. plus post., or lot to highest bidder.

(R) ONERIO L. SABETTO, 2083 Random Rd., Cleveland 6, O., will sell *Railroad Magazine*, Aug., Nov. '39; Oct. '40; Jan., July, Aug. '41; May '42, 35c p. p.; Feb. '46; Nov. '44; Oct. '47, 25c p.p.; also *Trains*, July, '43, Oct. '44, 35c p. p. Wants *Railroad Magazines*, '29 '30, '31; *Trains* '40, '41.

(*) BOB SCHUUR, 174 Edgemoor Ave., Kalamazoo 34, Mich., will mimeograph railphoto lists, etc. for railfans. Costs as little as 1c ea. Write for info. Also swaps, sells juice, steam pix. Wants pix abdn. Mich. elec. lines.

(R) J. C. SENDERAK, 2619 W. Cortez St., Chicago, Ill., will sell *Railroad Magazines*, good cond. Jan. '40 to Jan. '48; *Trains*, excell. cond. Nov. '40 to Apr. '45, 25c ea. TTs., 3 for 25c, *Off. Guides* Jan. '39, Oct. '41, 75c ea.

Sgt. EDWARD B. SHALLOW, Jr., 12276471, 1934 ESC, A. P. O. 987, Care of Postmaster, Seattle, Wash., wants to buy negs. or pix NYC, LI, NH, Boston & Albany, B&O PRR; esp. negs., pix NYC 6000, 4000 class loco.

LEWIS SMITH, R. 1, Alliance, O., wants *Off. RR. Guides* prior '30; will pay $1 ea., plus post.

(*) C. GEO. STEVENS, 62 Seymour Rd., London, E. 10, England, wants interurban, streetcar pix, tts., maps, trsfs., tokens. Has London transport maps, tkts. (tram, bus, underground) in trade.

S. F. STYLES, 839 Alverstone St., Winnipeg, Man., Canada, sells, trades pix, negs., size 616 CPR, CNR, NP, Soo Line, GN, WEC, BCER, SP, 7c ea. List 10c.

RENALDO PAYARES SUAREZ, Fernando de Layas No. 404, Vigia, Cafaguey, Cuba, wants to corres. with *Railroad Magazine* readers or fans in Alaska, Mexico, Guatemala, Bermuda, Panama.

SAMUEL TANNENBAUM, 135 Magnolia St., Hartford 5, Conn., will sell old, rare tts., emp. tts., annual

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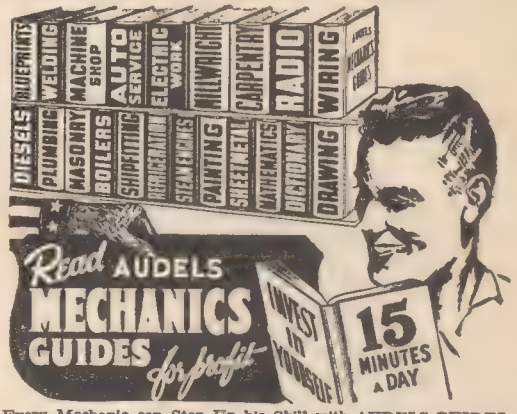

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(R) ALAN T. TATTERSALL, 207 Sunrise Bldg., Ft. Pierce, Fla., will sell or trade *Railroad Magazines* for rr. annual passes; has May, June, Dec. '32; May, Oct. Dec. '33; Jan., May-Dec. '34; Feb.-Apr., Nov. '35; Dec. '36; Jan., May, June, Aug.-Oct. '37; Jan., June-Dec. '38; all '39 thru '43; Jan.-July '44; '45; June-Dec. '46; '47; '32, '33 in fair cond., all others good.

(R) C. E. TEED, 960 Terrace 49, Los Angeles 42, Calif., will sell *Railroad Magazines* '35 to '45 ea., perf. co d.

(R) TOM UNDERWOOD, Jr., 1530 Rhode Island Ave., N. E., Washington 18, D. C., will sell *Railroad Magazines*, Nov. '46; Feb., Aug., Nov., Dec. '47; also *Model Railroader*, Dec. '41, Dec. '46, 25c ea, or lot $1.50.

W. J. WALDER, 74 Brookside Ave., Toronto 9, Ont., Canada, has size 616, few 620 pix CPR, CNR, TH&B, AC&HB, to sell, trade. List, sample, 10c. Sell or trade size 616 CP negs. Wants negs. CPR 440, 260, 460; also Canadian shortlines.

EDWARD J. WALKER, Jr., 13 Stanley Oval, Westfield, N. J., wants New Haven pix in exch. for Lehigh Valley, size 616 negs. and pix.

(*) EDWARD B. WATSON, 934 Albermarle Rd. Brooklyn, N. Y., will trade, buy BRT, BMT pix, pref. any prior '35.

L. D. WEBSTER, 124 Tompkins St., Cortland, N. Y., has 13 vols. *Science of Rys.*, by Kirkman to trade for emp. tts., dime novels, boys books.

ARTHUR W. WEILAND, Columbia Rd., Olmsted Falls, O., will pay $3 for *Off. Guide* prior '25. Write yr., cond.

(*) EDW. WILKEMMEN, 2539 N. 72nd St., Wauwatosa 13, Wis., offers size 116, 120 pix Milw. Rd.; BA&P; GB&W; C&NW, Milw. elec. for pix same size Milw. rd., steam, elec. locos; also BA&P; CB&Q; GB&W, C&EI, C&NW locos.

JOHN A WOOD, 1816 E. 6th Ave., Vancouver, B. C., Canada, offers BCER negs. for sale, trade in Canada. Sale only in U. S., list, sample, 25c.

Model Trading Post

JOHN ALBRIGHT, 509 N. Sabina St., Anaheim, Calif., has std. gage elec. frt. tr., incl. all eqpmt; fair cond.

JOHN BELL, 1508 Howard Pl., Harrisburg, Pa., will sell std. gage tr. eqpmt. List for stamp.

ROWLAND BERRY, Box 1058, Seaside, Ore., has HO items, Varney, Mantua, Roundhouse & Rail Chief, some loco, streamline pass., frt. still kit form; wants Lionel 763 and switcher loco or will sell HO items reasonable. List for stamp.

LEWIS M. BROWN, 115 Prospect St., Warsaw, N. Y., wants to buy Lionel O gage switcher, 19400 caboose, good cond. Has 6 car work tr., Lionel loco 1686, good cond. for $22.50. Also Bascule bridge; 94 coal elevator; 165 crane; two 1045 Watchmen, half-price.

CLYDE BUXTON, R. R. 2, Loveland, O., will buy or trade for std. loco pts. or locos, any cond. Wants Lionel eqpmt., O gage; write for details.

(R) WM. J. DEPPE, 280 Woodbine St., Brooklyn 21, N. Y., has 160 issues various *Railroad Stories*, '30 to date, rr. pix to trade for scale eqpmt., any gage.

FRANK A. DI SANTIS, 618 Chapel St., Schenectady, N. Y., will sell 3½ in. gage live steamer, excell. cond., new; tank type 2-4-4-T, 4¾ in. drivers, 1⅝ in. x 2 in. cylinders, injector and steam pump, steam brakes, Baker gear. $295.00.

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(*) FRITZ HARDENDORF, 4354 Shenandoah Dr., Residence Park, Dayton 7, O., has blueprints of interurbans that ran in Ohio made to order for model building. Send for list.

JOHN A. HORTON, 4115 Francis Ave., Cincinnati, 5, O., will sell or trade one Buddy L loco., tender, also two O gage Dorfan cars., trk., trsfs.; can use all types O gage. Answers all mail.

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LOUIS SCHMITZ, 4911 N. 28th Ave., Omaha 11, Neb., will sell vols. 2 to 13 incl. *Model Railroader* to highest bid over $75.

L. R. SCHULHAUS, 91-10 21st St., Queens Village 8, N. Y., will sell to best cash offer, 47 *Lionel* mags.; *Model Builders* '32 to '41; 10 issues slightly clipped.

ERNEST STERN, 103 W. 98th St., New York 25, N. Y., will sell built-up HO scale locos, Walthers Diesel switchers, Mantua goat, Varney Diesel A unit, 17 assorted frt. cars, most excell. workmanship, singly or compl. portable layout, incl. bldgs., power supply. List on request.

TOM UNDERWOOD, Jr., 1530 Rhode Island Ave., N. E., Washington 18, D. C., will sell HO gage boxcar, $2.

DALE VANSTEE, 353 Quimby St., Grand Rapids, Mich., wants to sell new HO locos, cars, trk., switches, eqpmt. Write for list.

JOS. WILHELM, 4123 Danneel St., New Orleans, La., will swap for HO gage eng., steam, outline, *Jane's Fighting Ships* for '44, *Merchant Ships for '44; also* books on boatbuilding. Write for details.

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Flagstops

FANTRIPS. Central Ohio Railfans Ass'n, 73 East Gay St., Columbus 15, O., announce a tour of the remaining lines of the Columbus & Southern Ohio Electric Company (Columbus) for Sunday, August 1st. Trip will start from Chestnut and High streets at 1:30 p.m. Reservations should be made in advance; fare, $1.50. Write B. J. Kern, Sec'y.

Fourth of July picnic-lunch special over the narrow-gage East Broad Top RR from Mount Union, Pa., leaving at 9:30 a.m., covering the entire line, including branches. Fare, $3; bring lady friend at no extra charge. Tickets and all details from Akron RR Club, Wm. P. Smith, Sec'y, 69 Marvin Ave., Akron, Ohio.

Joint Railfan Committee announces the following trips: *July 4th weekend* trolley trip in New York area via Brooklyn trolleys, IND rail-polishing train, all remaining lines in Jersey and selected lines of 3rd Avenue Transit; non-revenue equipment brought out for photo fans; tour starts at Park Row on Sat. morning 9:30 a.m. and ends Monday, cost $7.50 for three days. *July 17:* Saturday afternoon visit to New York Dock Ry., enginehouses, float bridges, etc.; group will meet at Park Place, alongside Woolworth Bldg.; fare, $1.75 before July 10th. *July 25th:* repeat performance of sold-out Erie trip to Port Jarvis, Graham line and Newburg. Leaves Erie's Jersey City station at 10 a.m., cost $4.75 before July 19th. *August:* no trips planned, except possible repeat of Erie tour (Aug. 15th) if overflow of July 25th demands it. *September 18:* Pennsy Flemington Branch, first-time in railfan history. Details later. *October 17:* CNJ to Green Pond Jct. via High Bridge Branch and Wharton & Northern. Details later. For information write Joint Railfan Committee, 296 Henderson St., Jersey City, N. J.

* * *

NEW HEADQUARTERS of the Joint Railfan Trip Committee are located at 296 Henderson St., Jersey City, N. J., and big plans for extended activities are underway. The recently-formed Railroadiana Library will be able to expand greatly here, and for the first time the committee can receive visitors and volunteer assistants each evening, from 6:30 to 9 p.m on weekdays, on weekends as manpower permits. All are invited.

* * *

PHOTO CONTEST, sponsored by Paramount Pictures and the General Camera Company of Chicago, offers trips to Hollywood and photographic equipment as prizes for the best stills or movies portraying the photographer's idea of a *Dream Girl*. Entry must have been taken *after* Sept. 15, 1947; must be submitted before August 31, 1948. All entries will be judged on basis of originality, imagination and techniques used, not on age, characteristics or subjects. Write General Camera Co., 2308 W. Devon Ave., Chicago 45, Ill. for an entry blank, see *Dream Girl*, and go to work on your favorite theme.

* * *

1948 CONVENTION of the National Railway Historical Society, Inc., will be held in Baltimore over Labor Day weekend, Sept. 4-6th. Tentative plans provide for tours Saturday, banquet that night; steam trip on Sunday and electric trip, Monday. For all information write Robert W. Janssen, Sec'y Balto. Chap., 2700 Joppa Rd., Baltimore 14, Md.

* * *

HELP WANTED. David Marshall, former editor of our model department, is preparing a follow-up to his successful *Model Railroad Engineering*. This book will tell the story of model pikes built or rebuilt more or less in accordance to the plans laid down in his earlier work. If your pike owes anything to Marshall's book, write him and tell him about it; if you have ideas on model railroading you'd like to air, then put them on paper and send them along. Photographs, even if they're not prize winners, will be greatly appreciated and carefully handled. Marshall's address is 314 Prospect St., South Orange, N. J.

* * *

MODEL ELECTIONS. New York Society of Model Engineers, Inc., Lackawanna Terminal, Hoboken, N. J., announces its officers elected last March: Clark H. Pool, Jr., Pres.; Harvey S. Armstrong, Vice-Pres.; George R. Brackmann, Gen. Sec'y; Seymann, Record. Sec'y; Walter Pecan, Treas.; George Rafferty, RR Supervisor; Clifton J. Campbell, Shop Supervisor. Club announces that over 12,000 attended its recent exhibition; encouraged, they are planning bigger things next time. Thanks go to Detroit Model Club, and to John Seehaven in particular, for generous assistance.

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